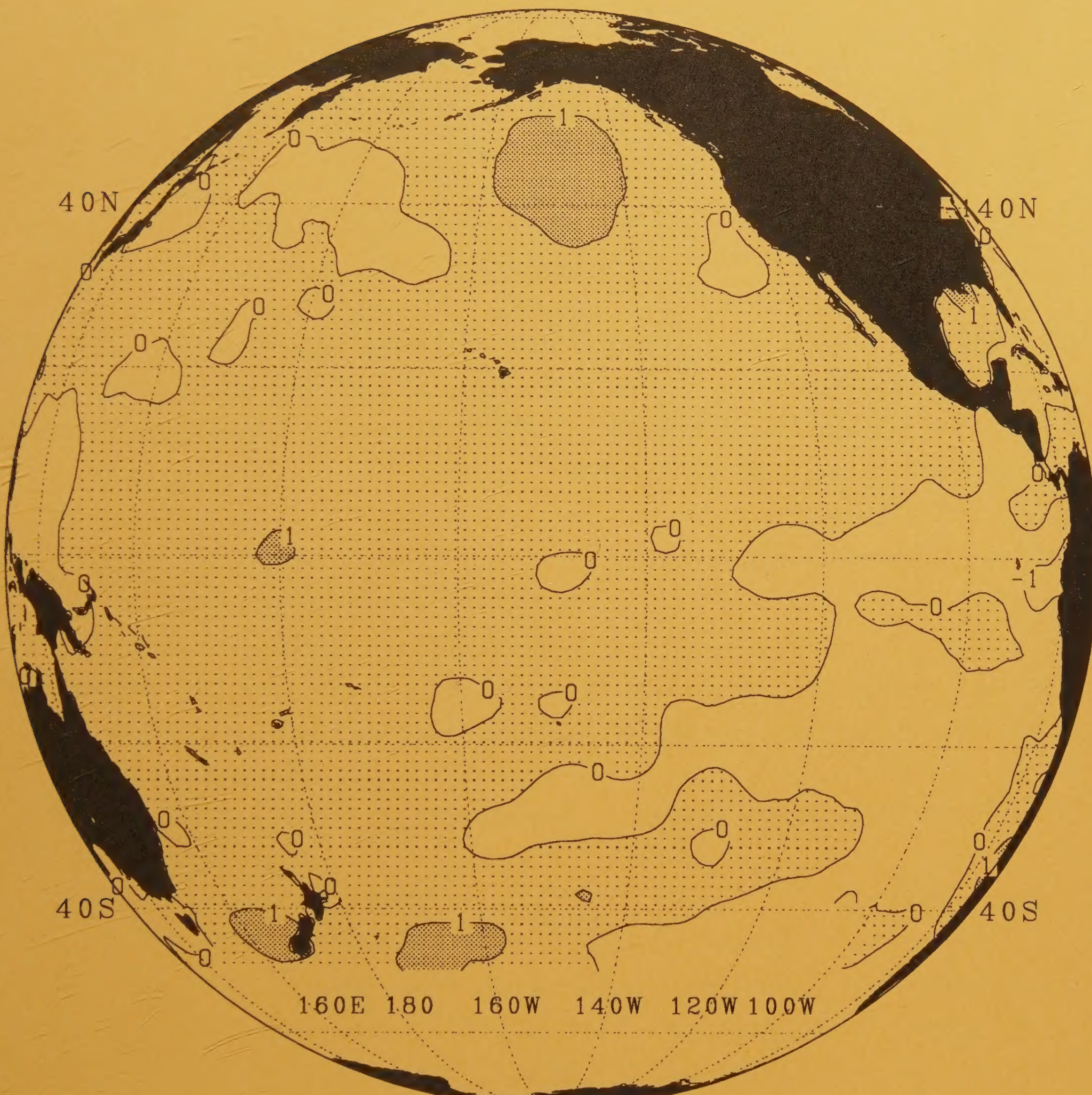
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気 象 庁 海 洋 月 報

Monthly Ocean Report
February 2005 (No. 146)



Climate and Marine Department

Japan Meteorological Agency

気象庁 気候・海洋気象部

平成17年2月

気象庁海洋月報は、気象庁 気候・海洋気象部 海洋気象情報室で作成しています。
本月報に関する問い合わせは、

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Monthly Ocean Report is prepared by the Office of Marine Prediction, Climate and Marine Department, Japan Meteorological Agency.

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表紙は、2005年２月の太平洋の月平均海面水温偏差図です。
陰影部は、平年より高温の海域を示しています。

The figure on the front cover shows the monthly mean SST anomalies for February 2005 in the Pacific Ocean.
Areas of positive anomalies are shaded.

目　次

* MGDSST (Merged satellite and *in-situ* data Global Daily SST)を使用している。

** 従来と同様の、現場観測による海面水温をもとにした解析値を使用している。

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* Based on MGDSST (Merged satellite and *in-situ* data Global Daily SST).
** Based on the traditional analysis using *in-situ* SSTs.

海況の特徴（２００５年２月）

日本近海の海況

海面水温は、日本海中部と日本の南で平年より1℃以上高かった。一方、常磐沖から三陸沖にかけての海域では平年より1℃以上低く、三陸沖には-2℃を超える負偏差が見られた。深さ100mで5℃以下の親潮系冷水の沿岸寄りの分枝は、宮城県沖まで達していた（第４図、第６図)。

黒潮は、紀伊半島から東海沖で大きく蛇行し、31° N付近まで南下していた。その後、139° E付近を北上し、三宅島付近を通過して、房総半島沖を北東に流れていた（第９図)。

太平洋の海況

太平洋赤道域の海面水温は、160° Eから160° Wにかけて、平年より0.5℃以上高かった。一方、110° W 付近と95° W以東では-0.5℃を超える負偏差が見られた。

北太平洋の海面水温は概ね正偏差であった。特に、35° Nから 55° Nの 160° Wから 140° Wにかけての海域で平年より 1℃以上高かった（第１７図)。

Highlights February 2005

Seas adjacent to Japan

SSTs were more than 1℃ above normal in the central part of the Japan Sea and the seas south of Japan. SSTs were more than 1℃ below normal in the seas from off Joban to off Sanriku. Negative SST anomalies exceeding -2℃ were found in the seas off Sanriku. The coastal branch of the Oyashio cold water, which was less than 5℃ at the depth of 100 meters, extended southward up to off Miyagi prefecture (Fig. 4, Fig. 6).

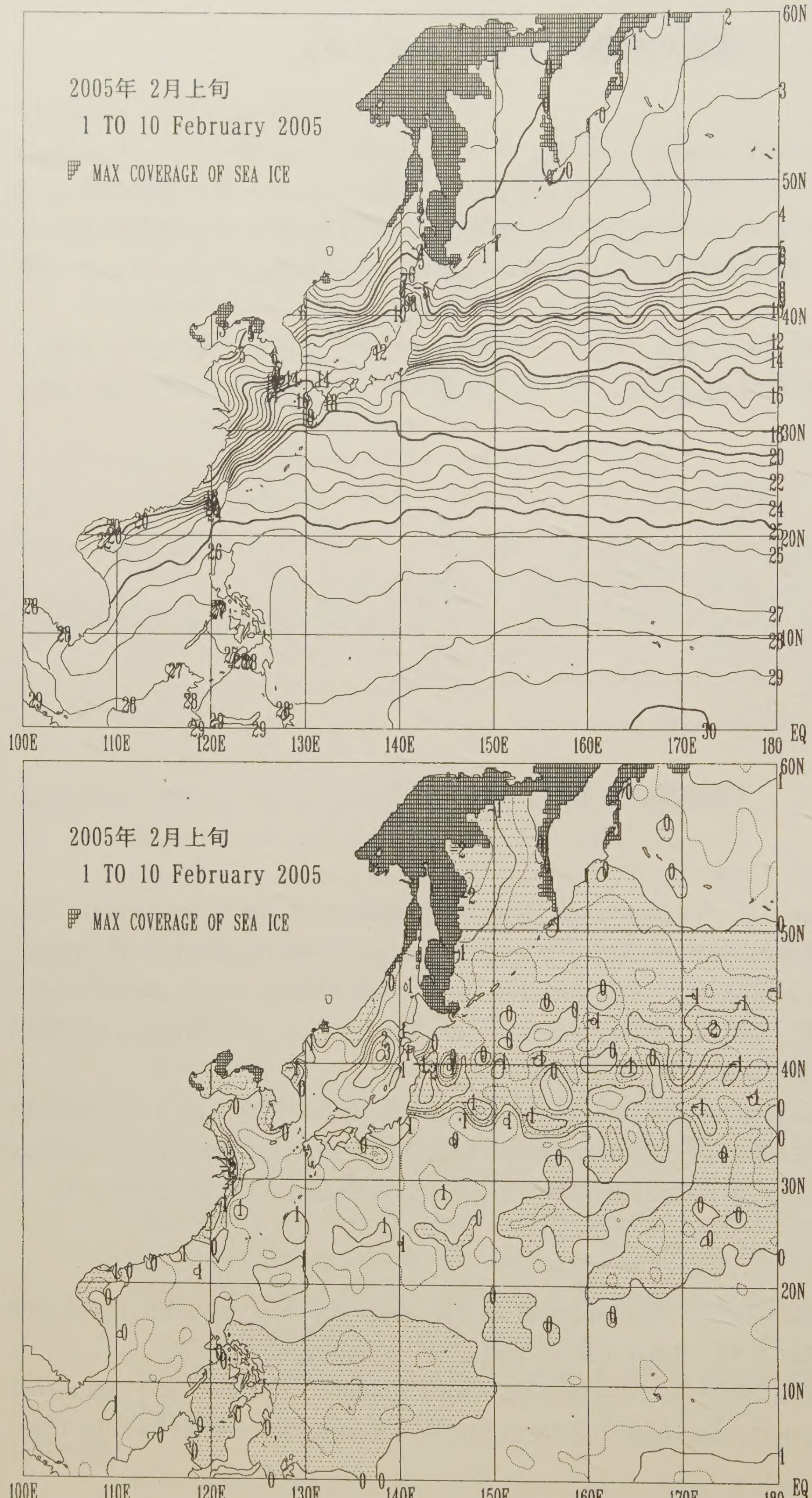
The Kuroshio meandered significantly from the area off the Kii Peninsula to the area off Tokai. The southernmost position of the meander was at about 31°N. After flowing northward along 139°E, it passed near Miyake Island and flowed NE-ward off the Boso Peninsula (Fig. 9).

Pacific Ocean

SSTs were more than 0.5℃ above normal in the equatorial seas between 160°E and 160°W. SSTs were more than 0.5℃ below normal east of 95°W and around 110°W.

In the North Pacific, SSTs were generally above normal. Positive SST anomalies exceeding +1℃ were found in the seas from 160°W to 140°W between 35°N and 55°N (Fig. 17).

Ten-day mean SST & Anomalies



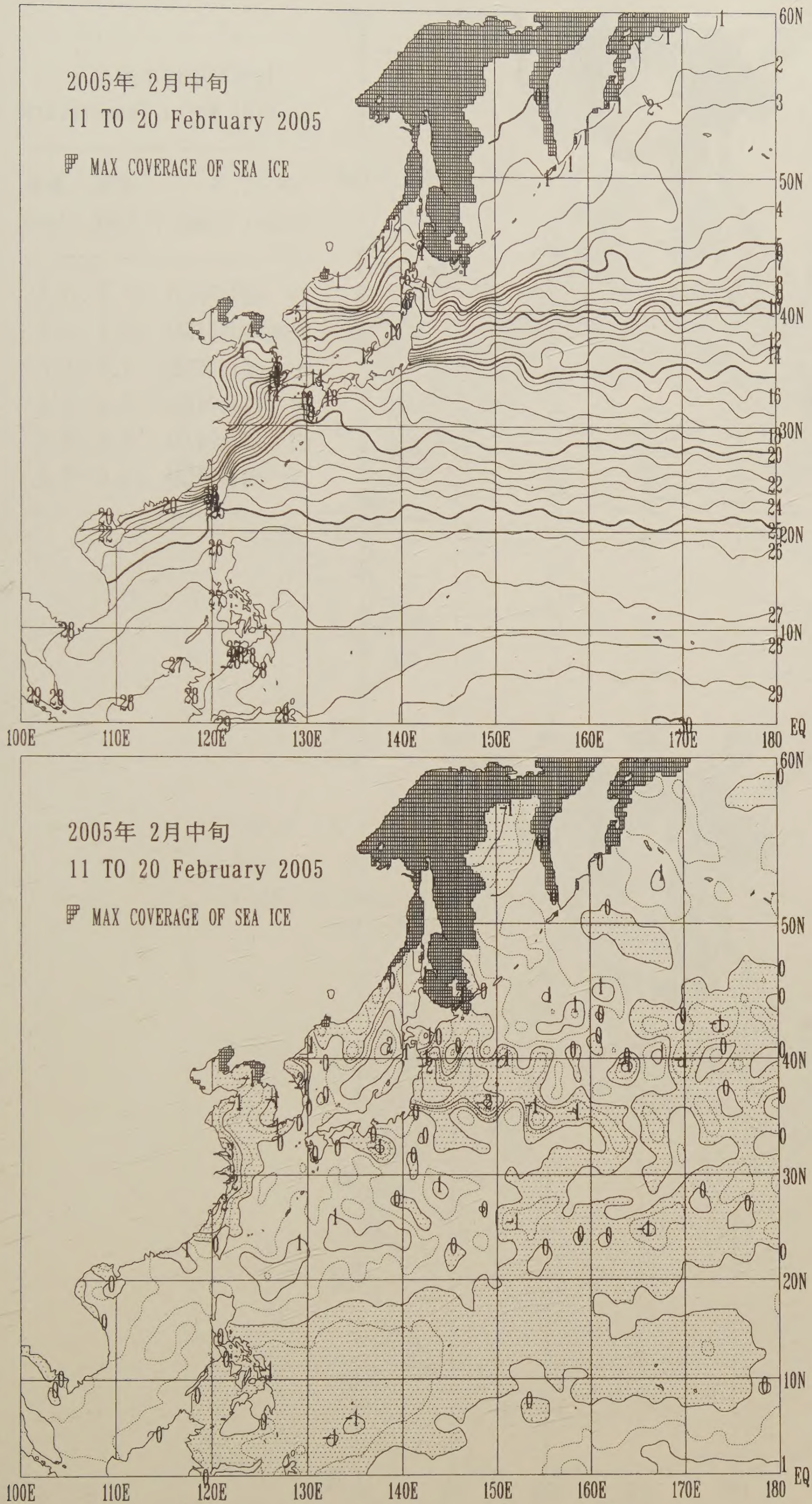
旬平均沿岸水温 (℃)
Coastal Water Temperature

地点名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣 (47918)	21.7	0.7
御前崎 (47655)	11.7	0.9
小名浜 (47598)	9.2	-0.5
宮　古 (47585)	8.0	0.3
江　差 (47428)	5.6	0.3
浜　田 (47755)	11.4	0.1

第1図 北西太平洋旬平均海面水温図 (上) 及び偏差図 (下) (2005年 2月上旬)

Fig. 1 Ten-day mean SST (top) and anomalies (bottom) in the western North Pacific for the 1st ten-day period in February 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are spotted.

Ten-day mean SST & Anomalies



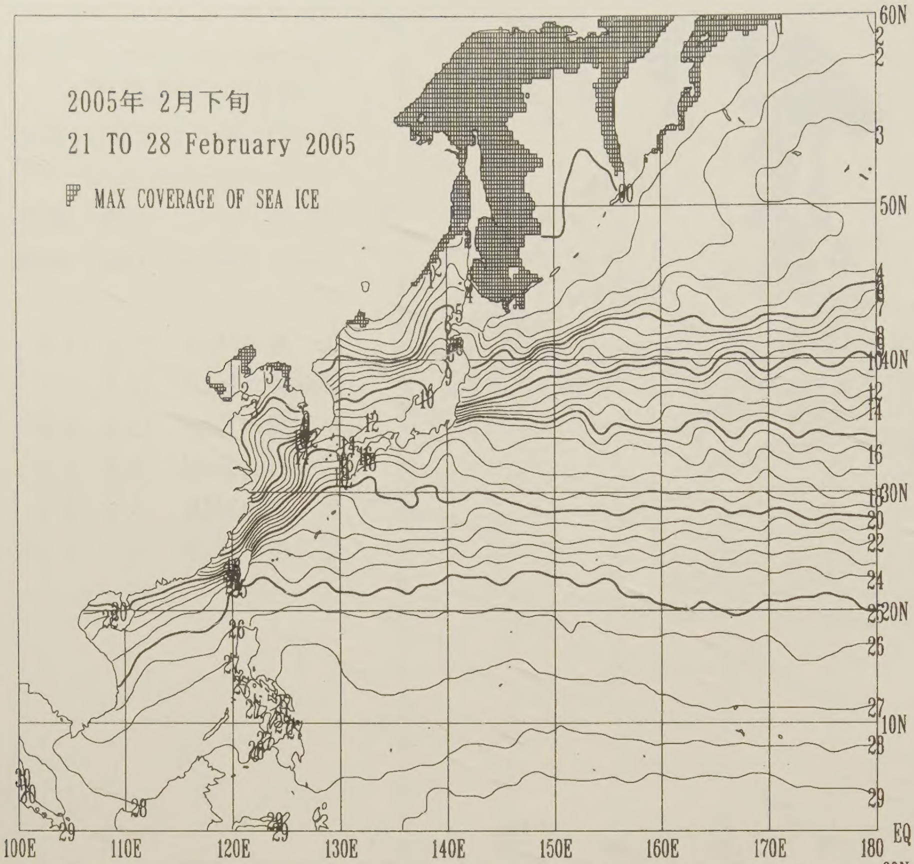
旬平均沿岸水温(℃)
Coastal Water Temperature

地点名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	22.6	1.2
御前崎(47655)	12.3	1.2
小名浜(47598)	8.1	-1.5
宮　古(47585)	8.0	0.8
江　差(47428)	5.0	-0.2
浜　田(47755)	11.7	0.1

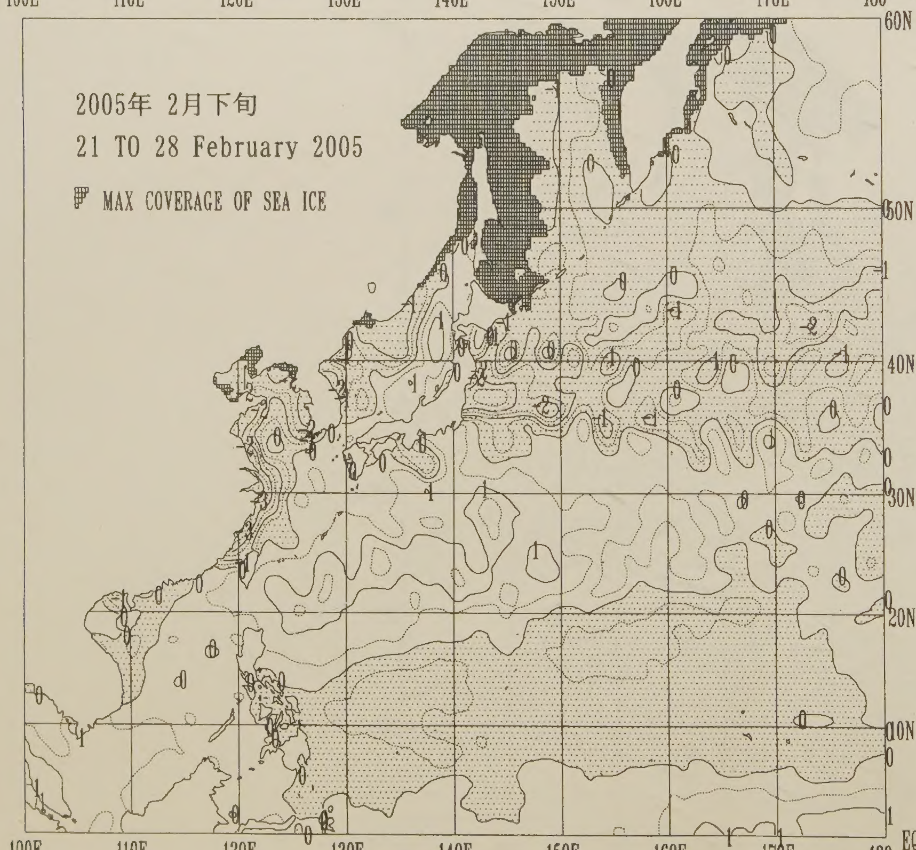
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Fig. 2 Ten-day mean SST (top) and anomalies (bottom) in the western North Pacific for the 2nd ten-day period in February 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are spotted.

Ten-day mean SST & Anomalies



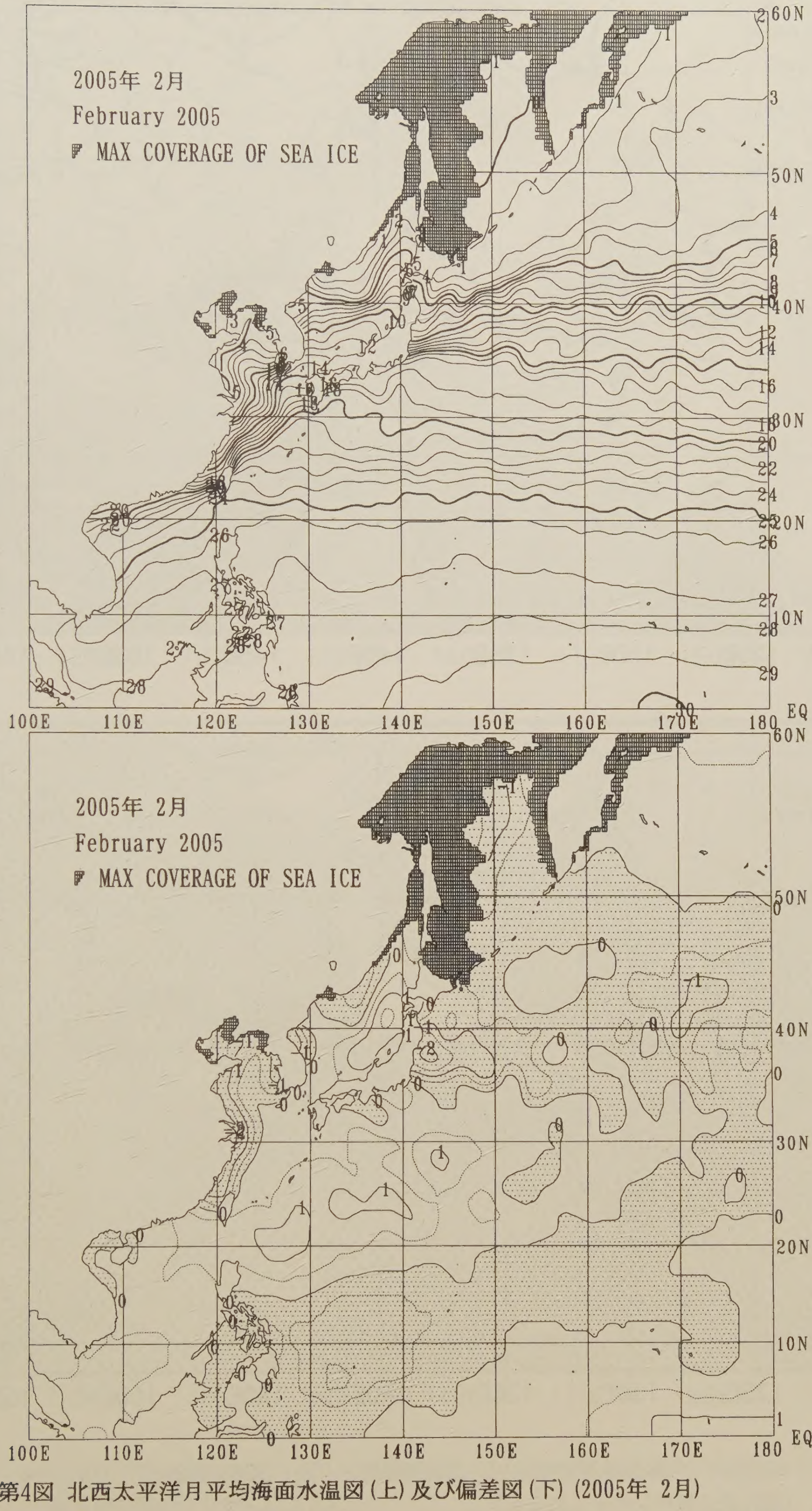
旬平均沿岸水温(℃) Coastal Water Temperature		
地点名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	21.5	0.1
御前崎(47655)	10.8	-0.4
小名浜(47598)	7.5	-1.7
宮　古(47585)	7.0	0.4
江　差(47428)	5.5	0.2
浜　田(47755)	11.0	-0.4



第3図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(2005年 2月下旬)

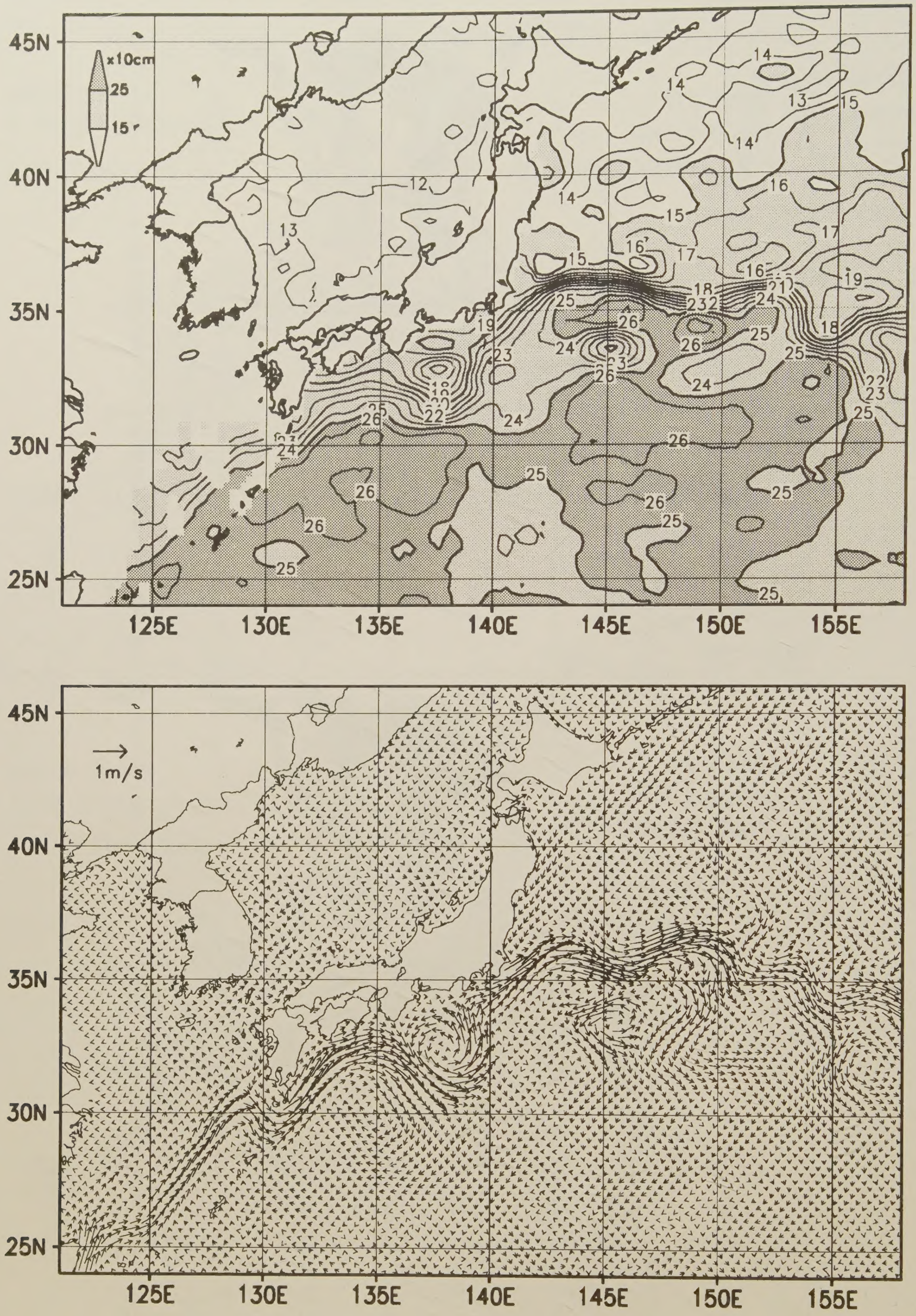
Fig. 3 Ten-day mean SST (top) and anomalies (bottom) in the western North Pacific for the 3rd ten-day period in February 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are spotted.

Monthly Mean SST & Anomalies



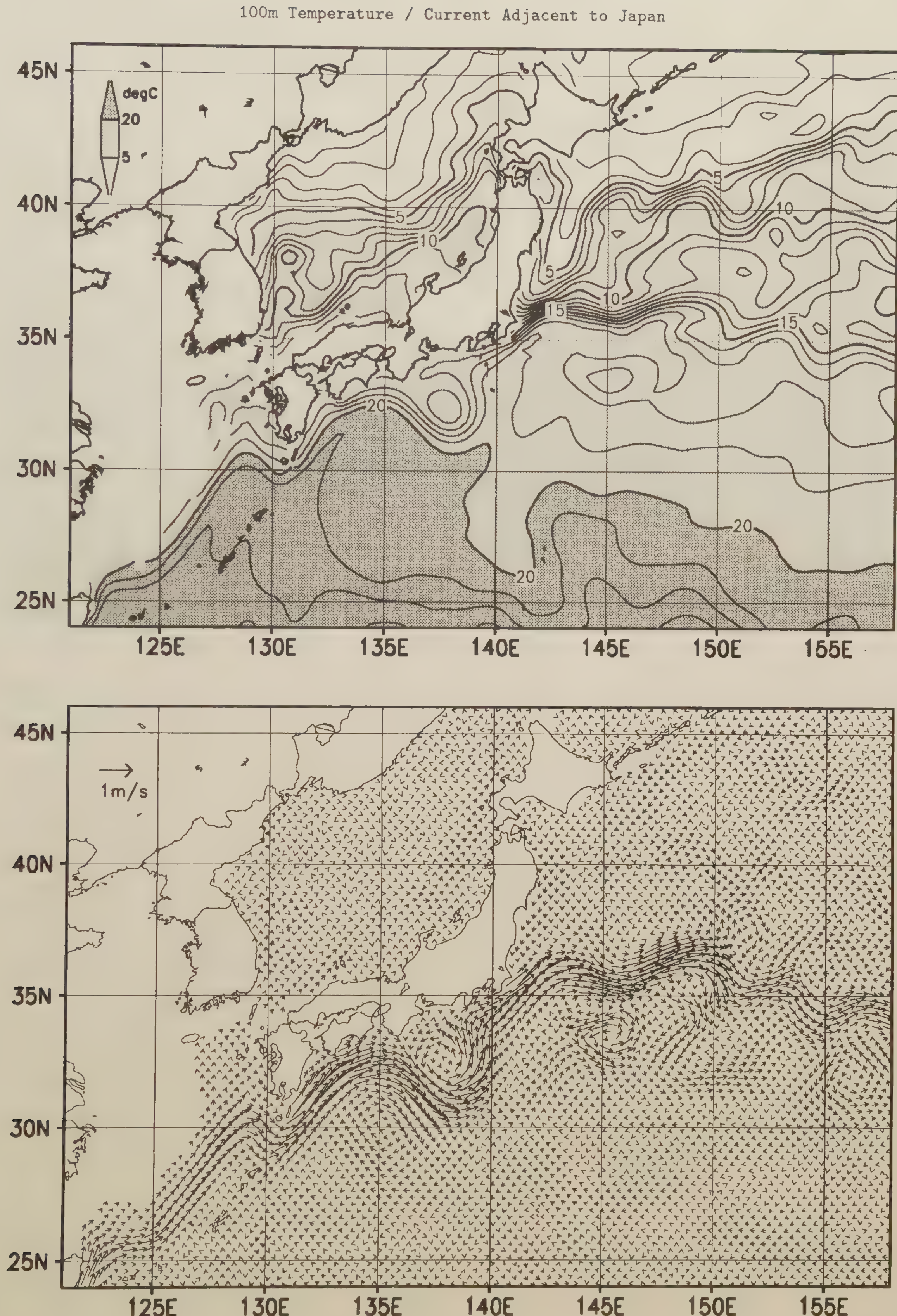
第4図 北西太平洋月平均海面水温図(上)及び偏差図(下) (2005年 2月)

Fig. 4 Monthly mean SST (top) and anomalies (bottom) in the western North Pacific for February 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are spotted.



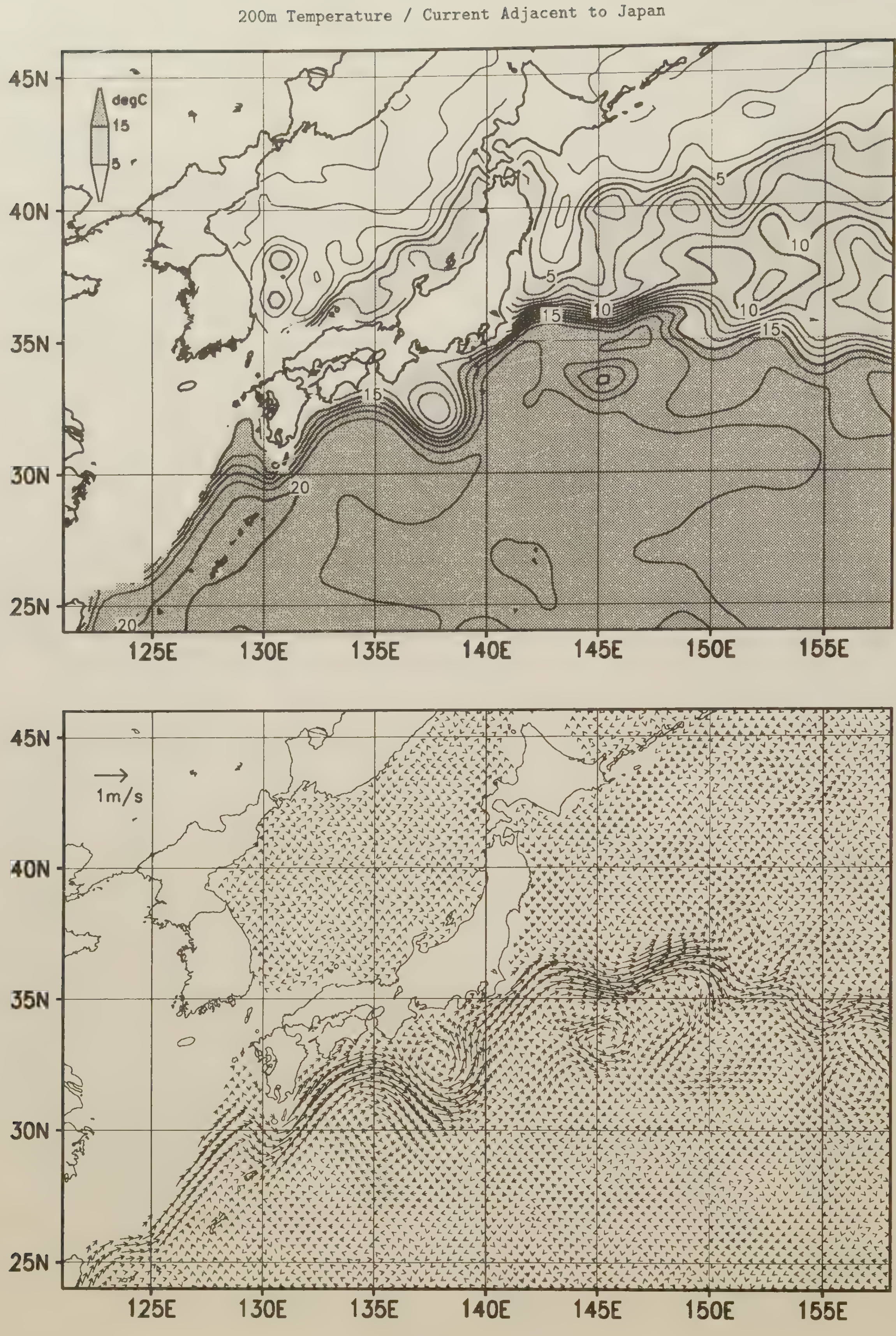
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（海洋総合解析システムによる）

Fig. 5　Monthly mean sea surface height (top) and current (bottom) in seas adjacent to Japan for February 2005. Contour interval is 10cm (top). (calculated by the Ocean Comprehensive Analysis System)



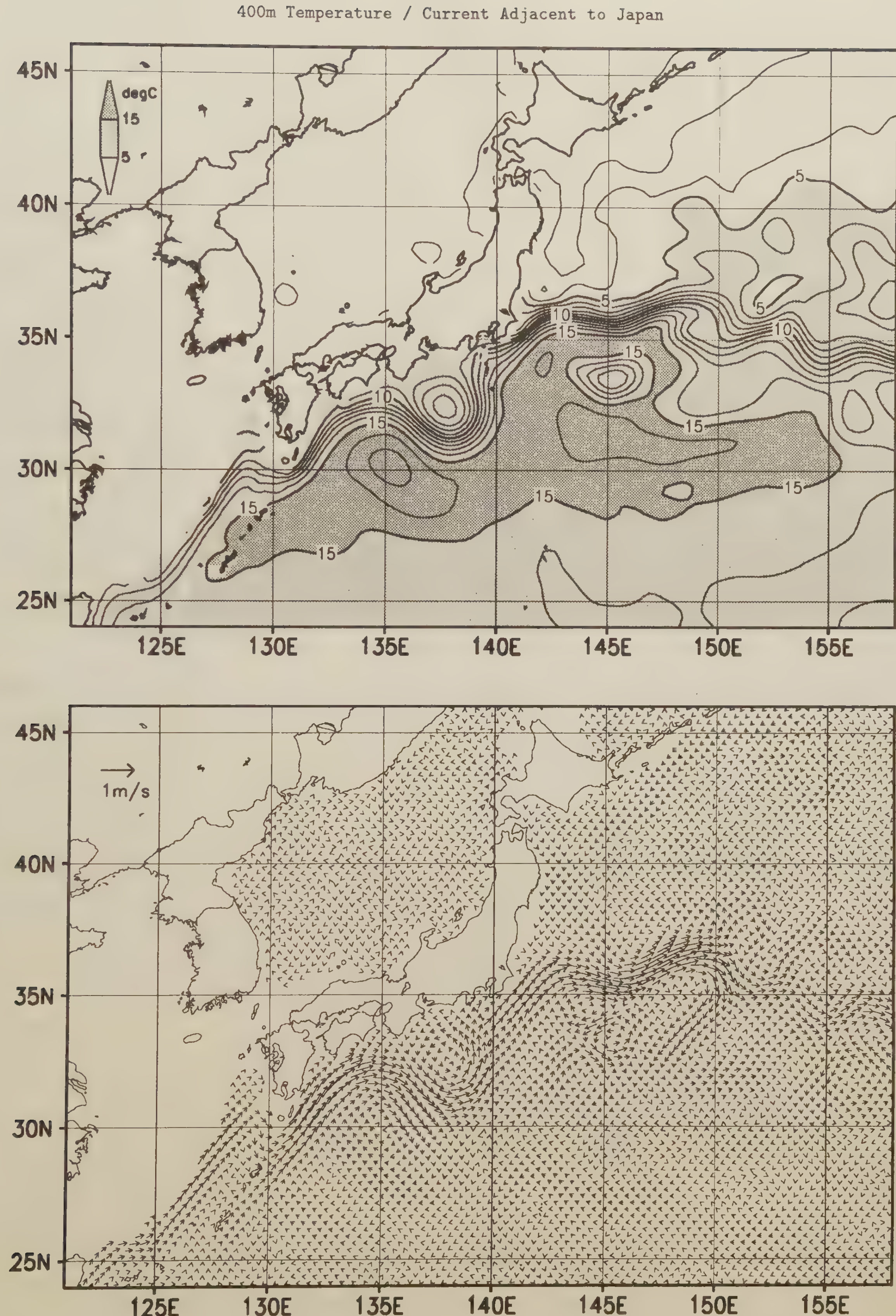
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Fig. 6　Monthly mean subsurface (100 m) temperature (top) and current (bottom) in seas adjacent to Japan for February 2005. Contour interval is 1 ℃ (top). (calculated by the Ocean Comprehensive Analysis System)



第7図　日本近海月平均表層水温図（上）と表層海流図（下）（深さ 200 m）（2005 年 2 月）
（海洋総合解析システムによる）

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第 8 図　日本近海月平均表層水温図（上）と表層海流図（下）（深さ 400 m）（2005 年 2 月）
（海洋総合解析システムによる）

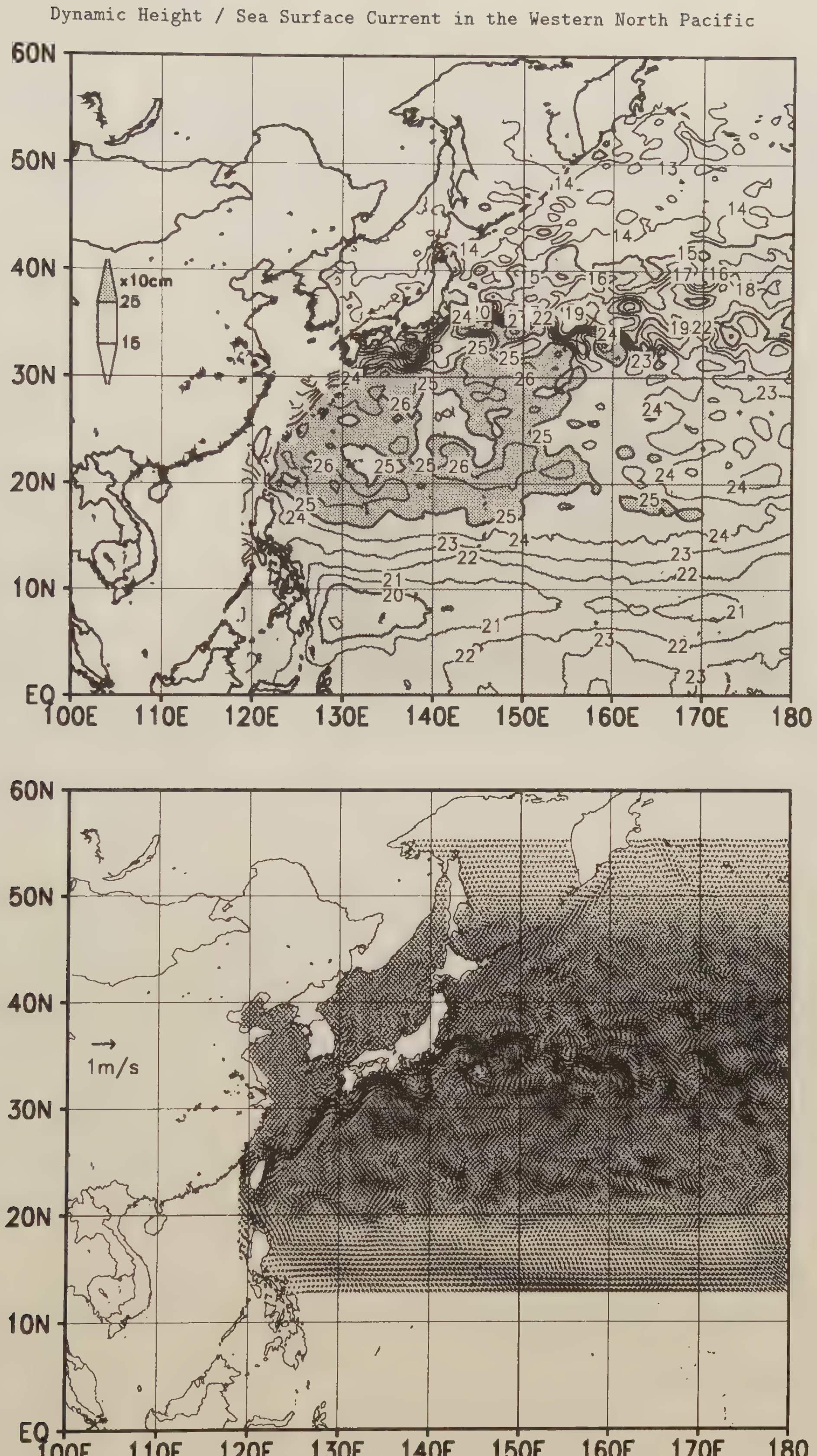
Fig. 8　Monthly mean subsurface (400 m) temperature (top) and current (bottom) in seas adjacent to Japan for February 2005. Contour interval is 1 ℃ (top). (calculated by the Ocean Comprehensive Analysis System)

Location of the Kuroshio axis



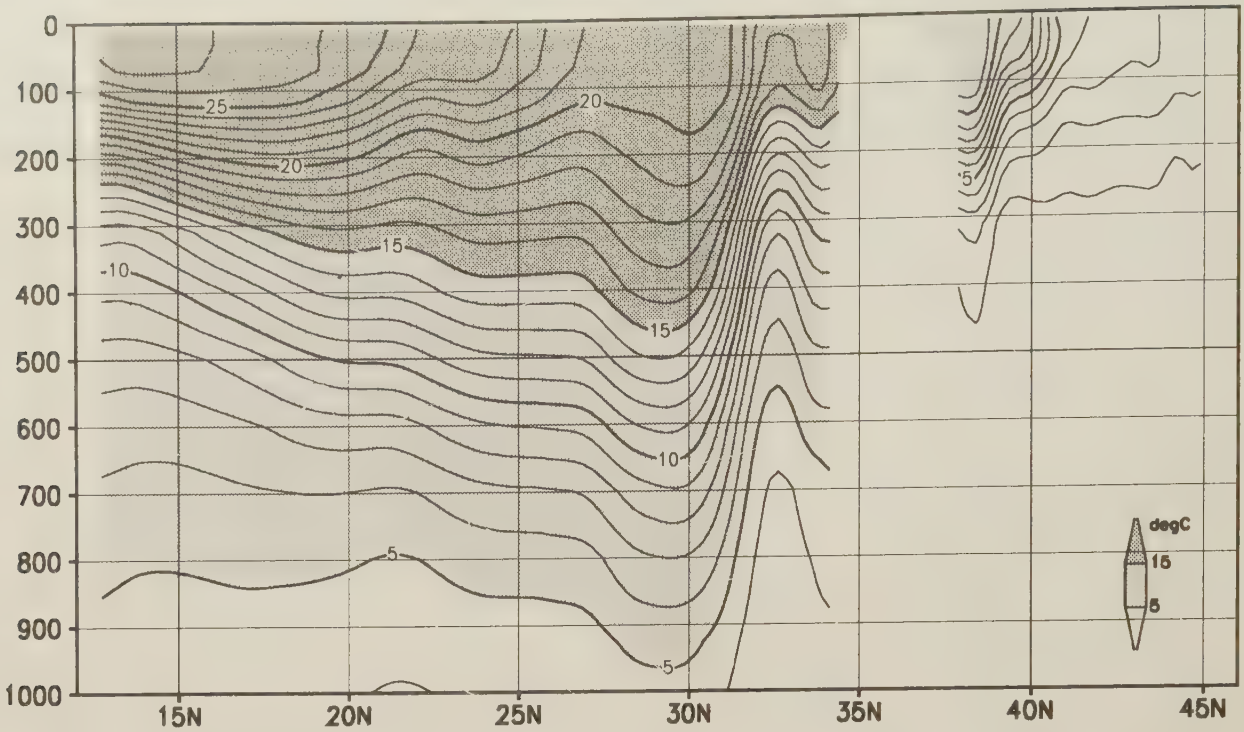
第9図 旬別黒潮流軸図

Fig. 9 Location of the Kuroshio axis



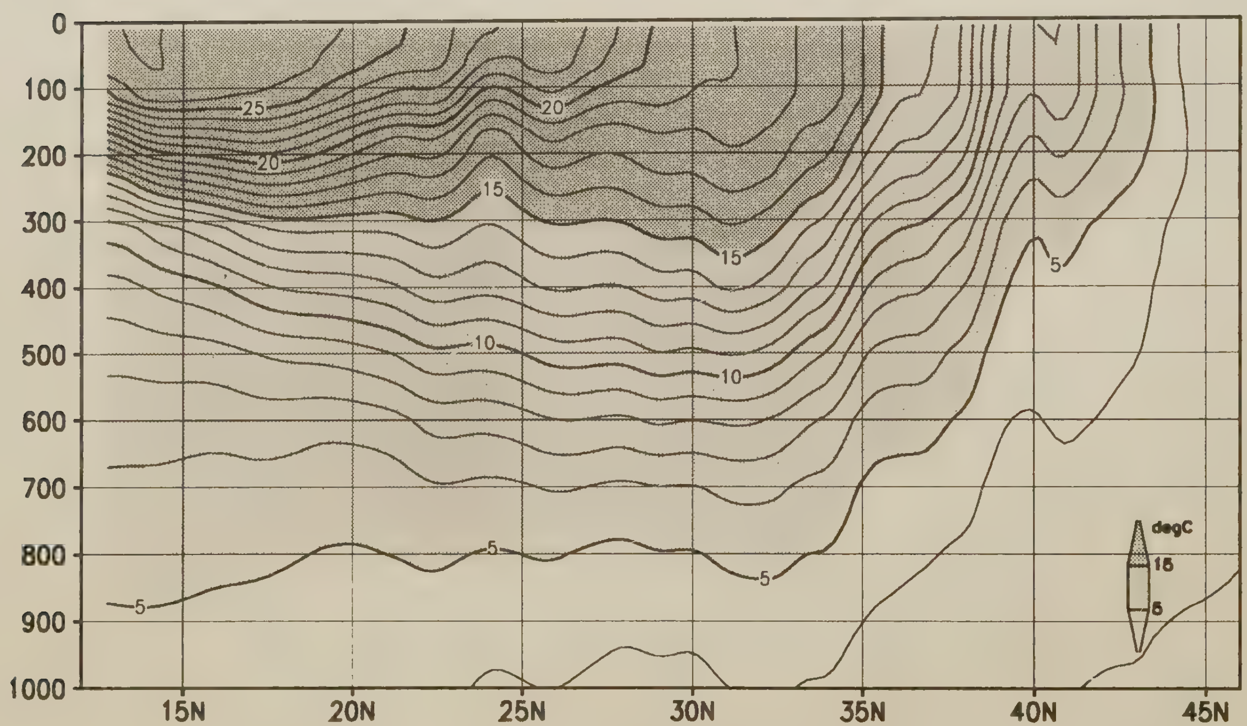
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Fig. 10　Monthly mean sea surface height (top) and current (bottom) in the western North Pacific for February 2005. Contour interval is 10cm (top). (calculated by the Ocean Comprehensive Analysis System)



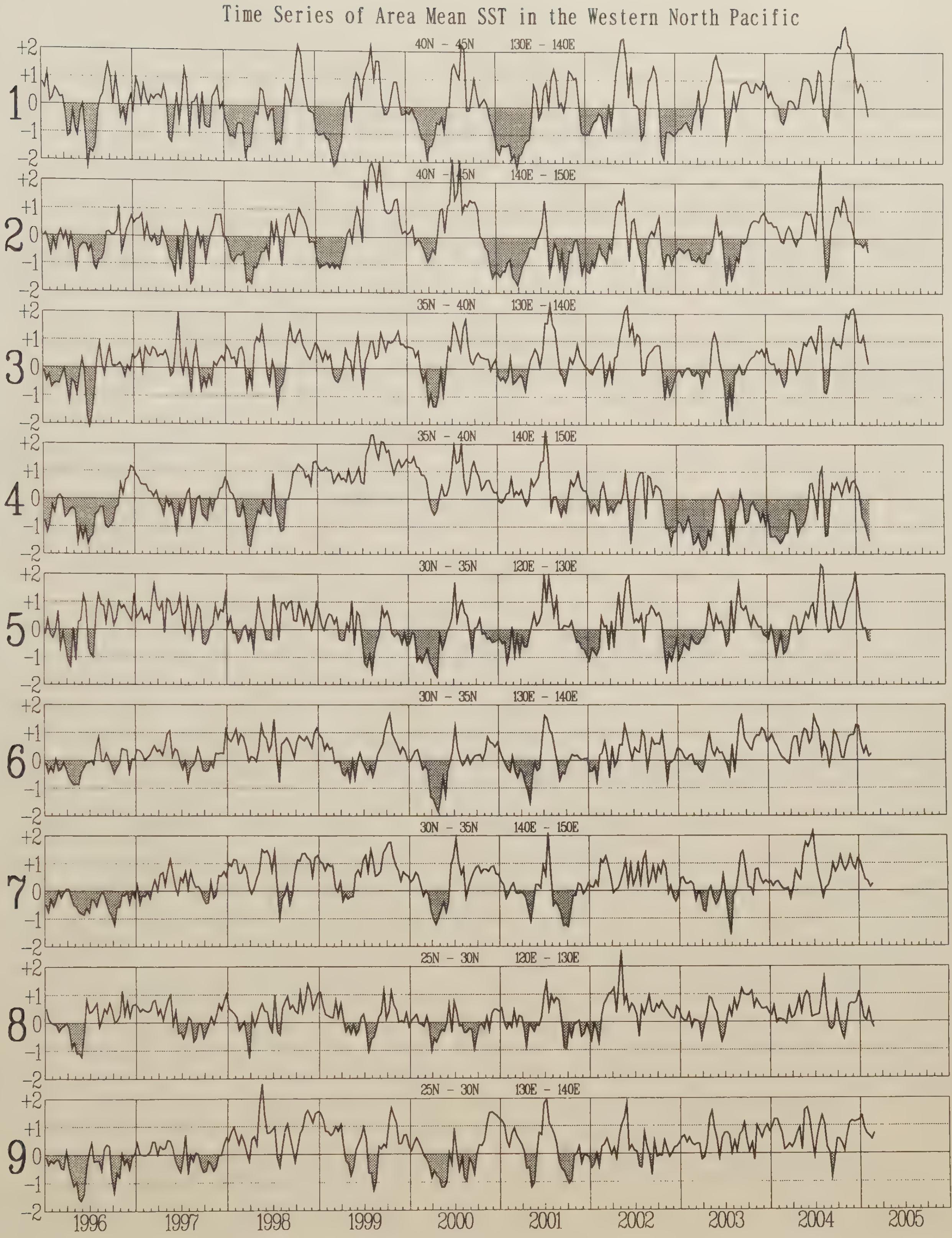
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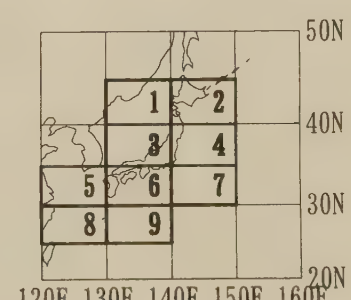
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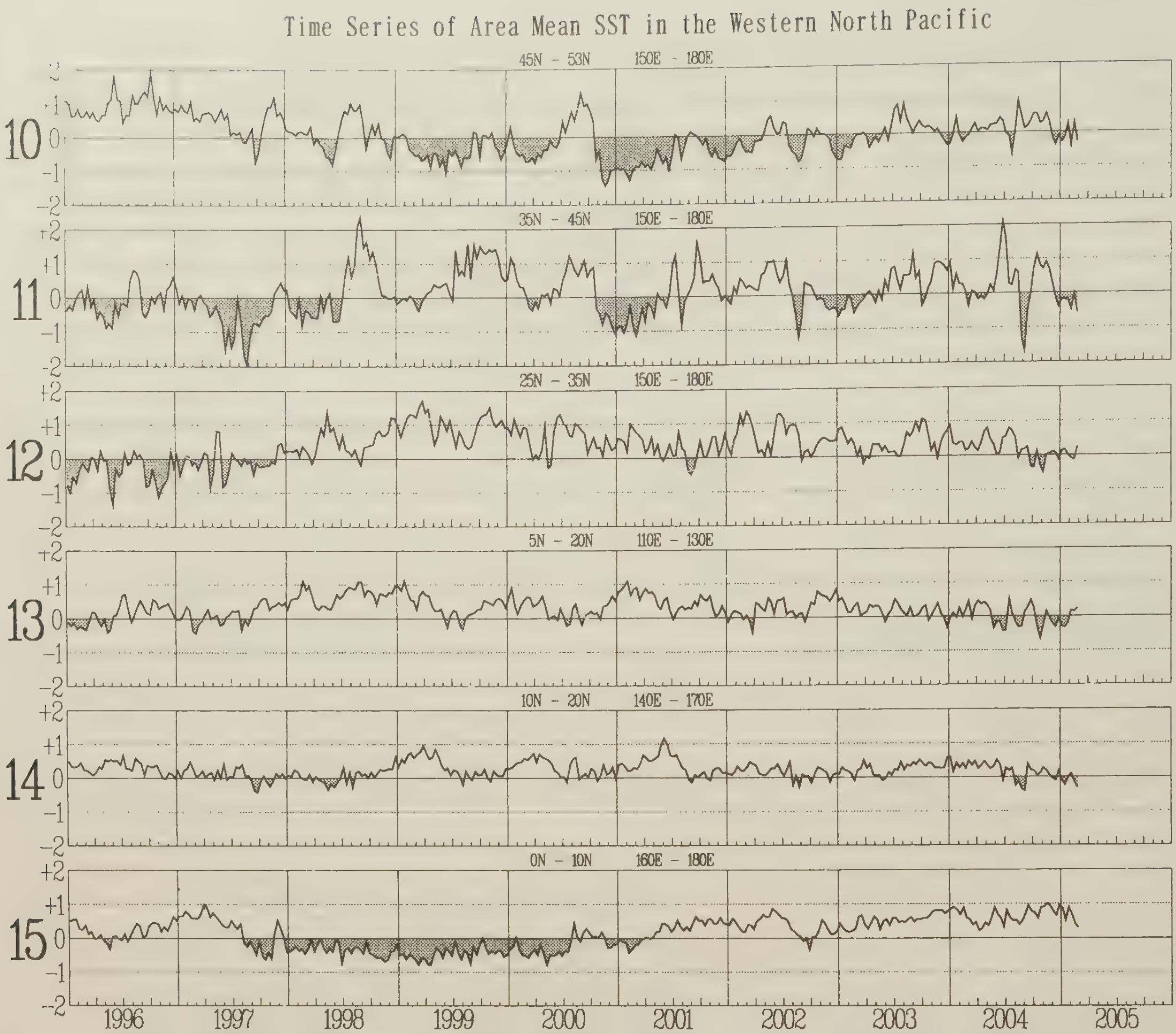
Fig. 12　Vertical cross section of monthly mean temperature along 165 °E for February 2005. Contour interval is 1 °C. (calculated by the Ocean Comprehensive Analysis System)





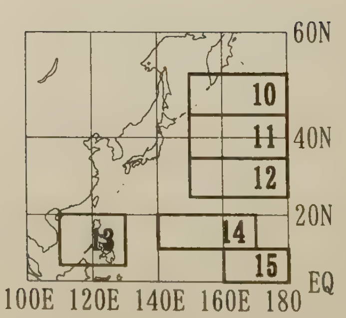
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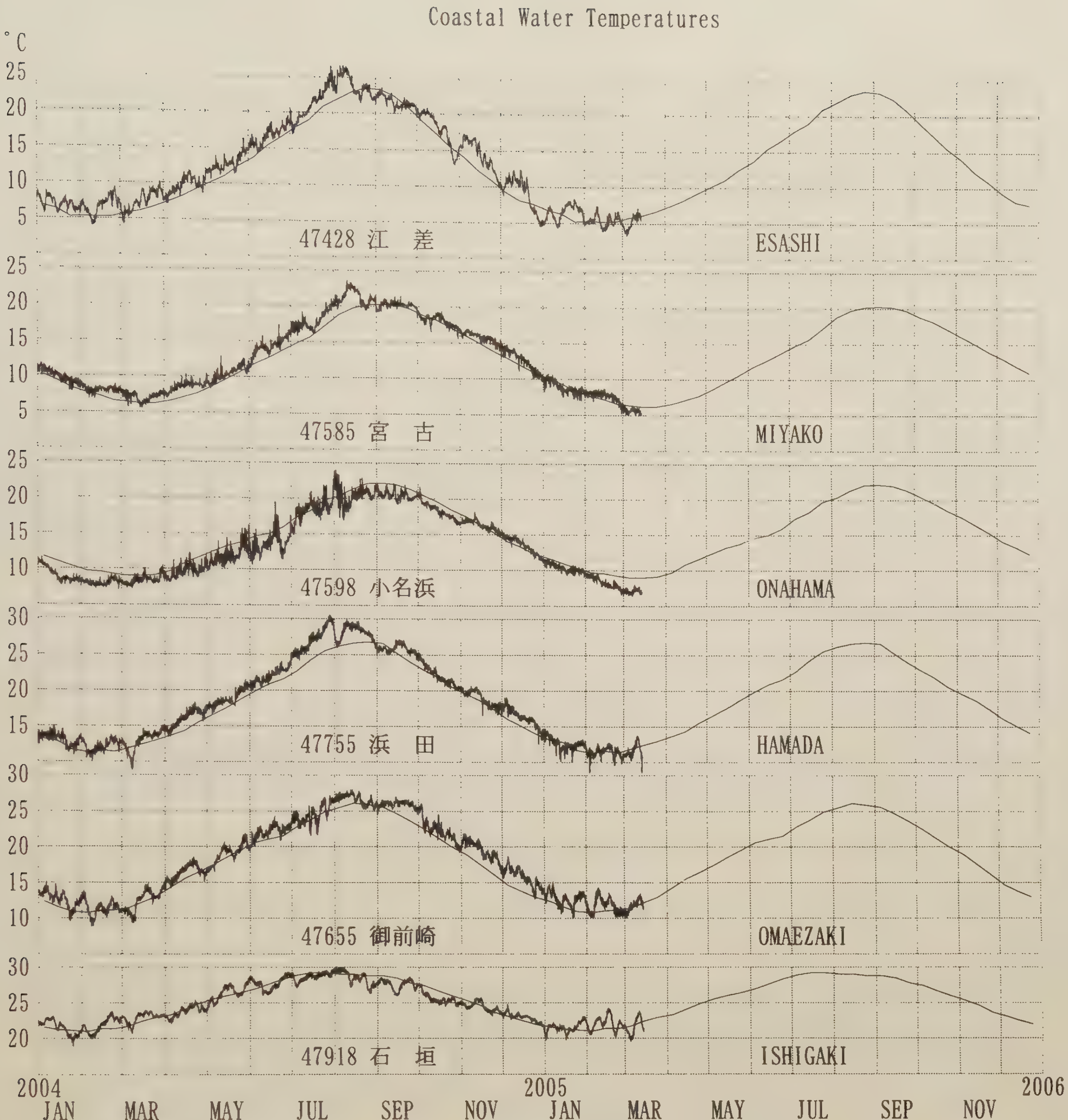
Fig. 13 Time series of the ten-day mean SST anomalies (°C) in the western North Pacific for the areas shown in the right panel. Negative anomalies are shaded. Anomalies are computed from the JMA climatology (1971-2000).



第13図　海域別旬平均海面水温平年偏差時系列図（つづき）

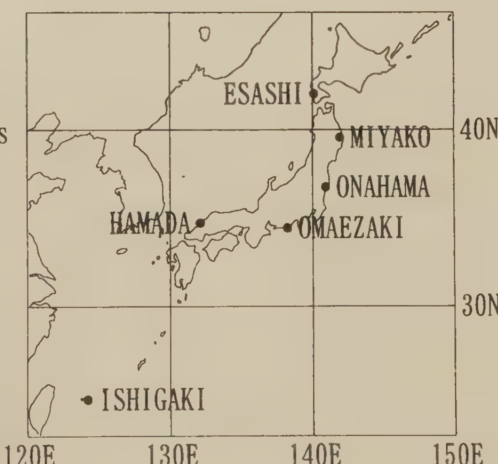
Fig. 13 (continue) Time series of the ten-day mean SST anomalies (°C) in the western North Pacific for the areas shown in the right panel. Negative anomalies are shaded. Anomalies are computed from the JMA climatology (1971-2000).

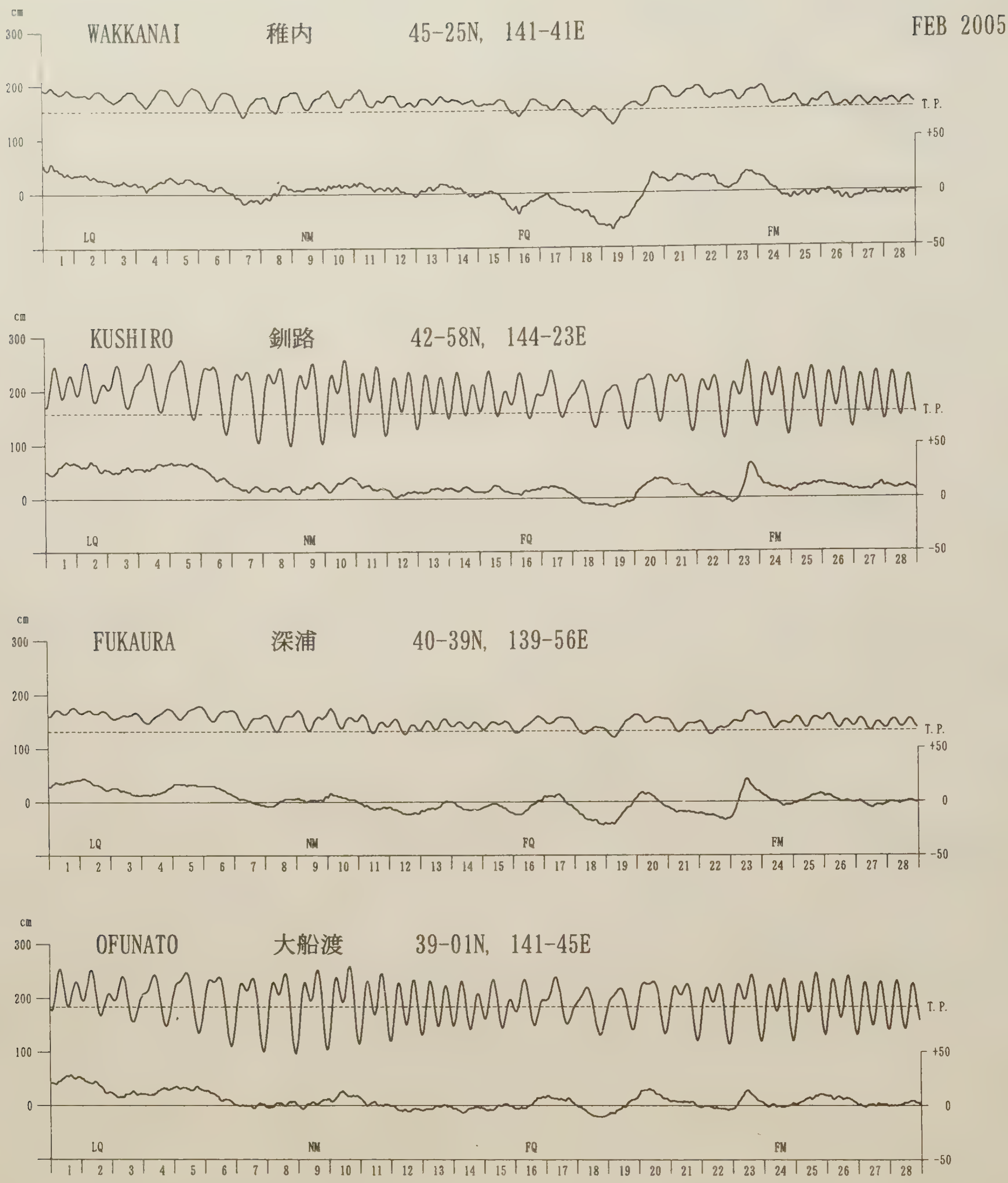




第14図 沿岸水温時系列図

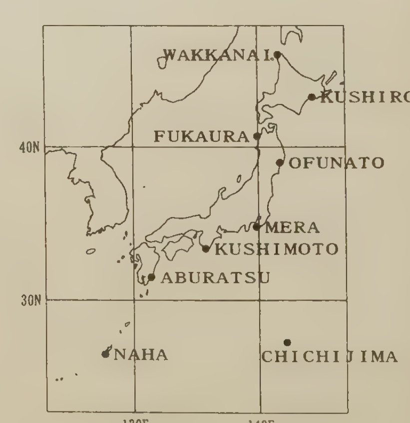
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Thin lines show ten-day mean climatology.





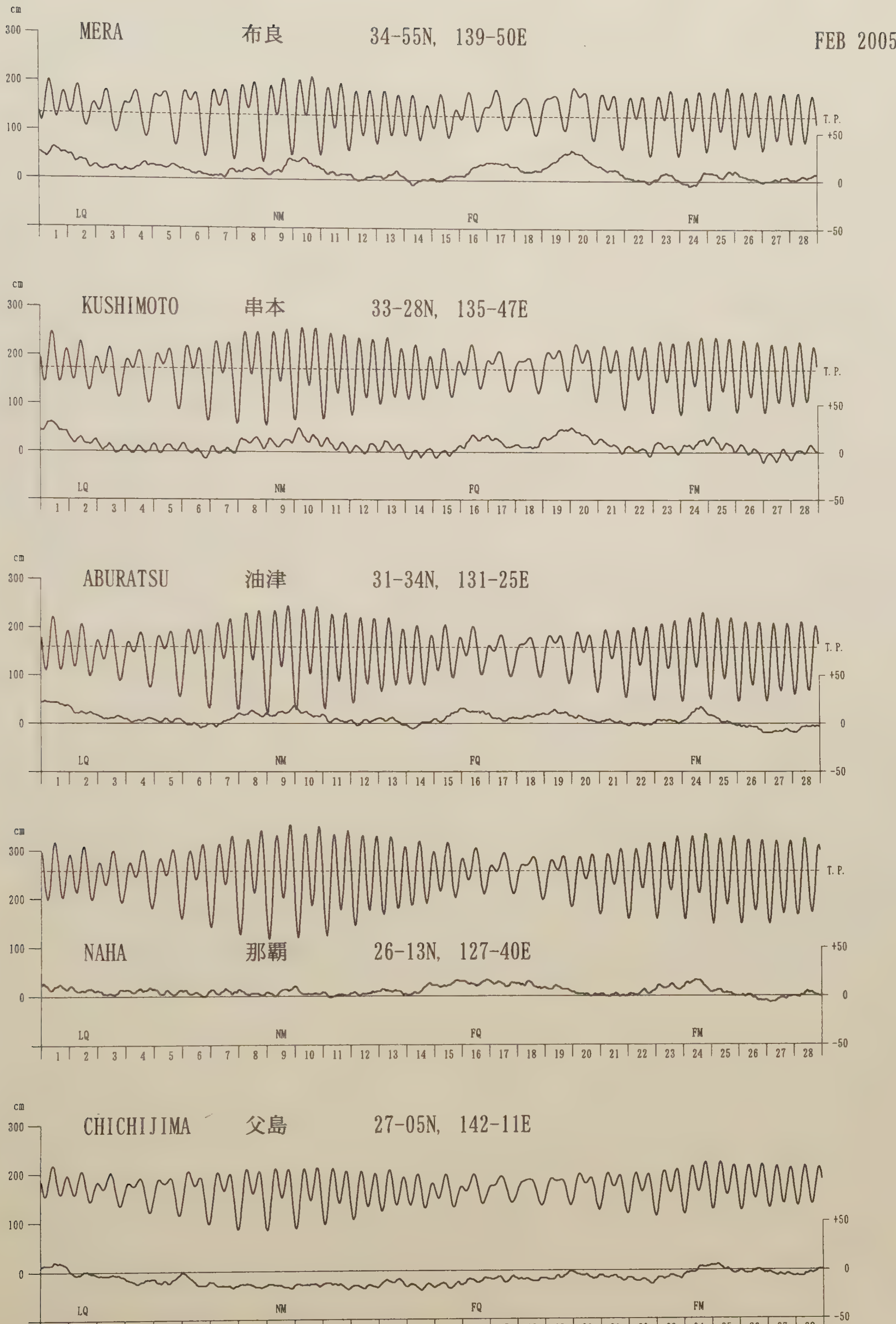
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Fig. 15 Time series of hourly sea level observation (upper line) and its anomalies (lower line) at 9 stations of the JMA in the right panel.
Short term variations are removed from raw data.



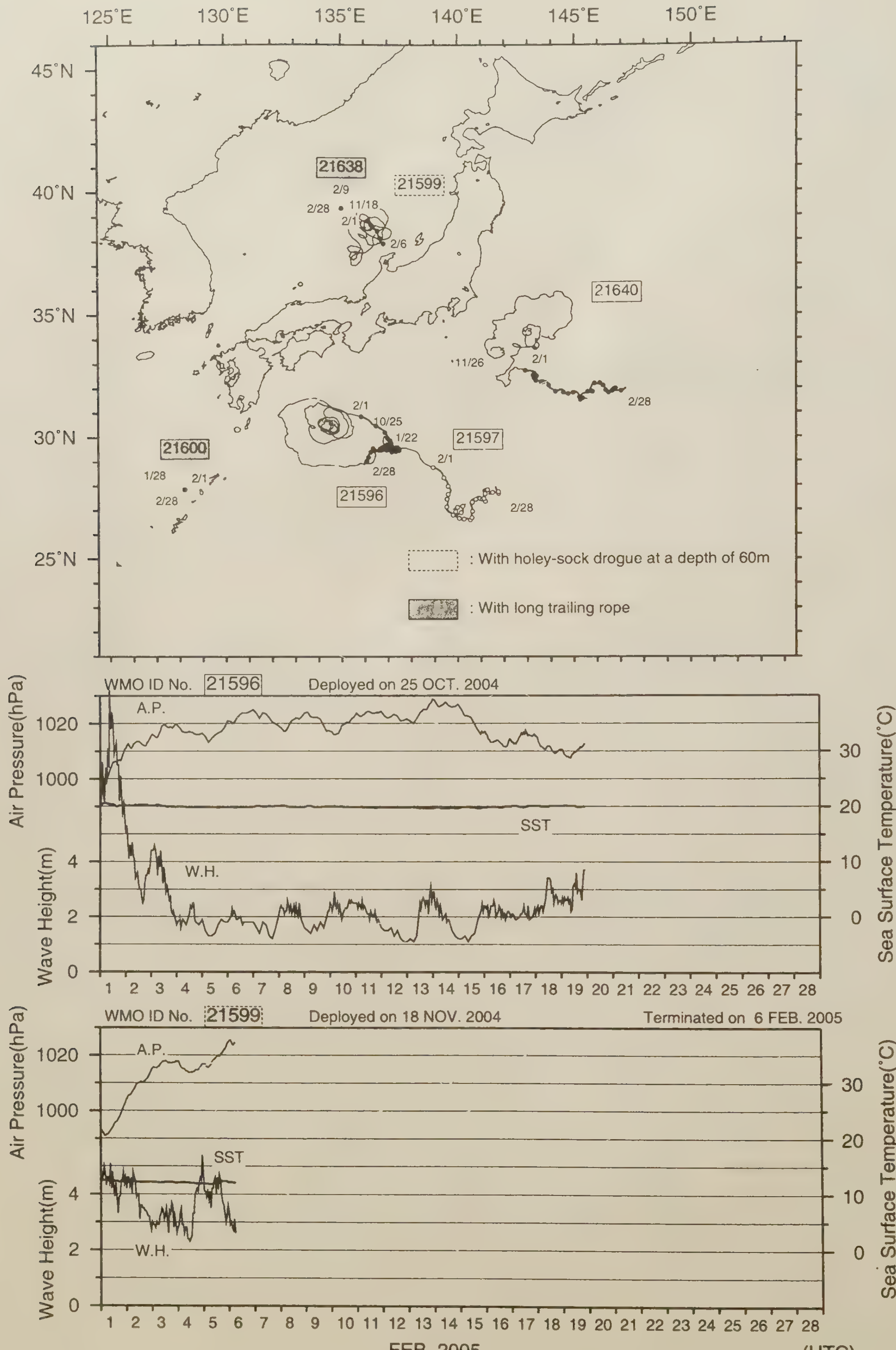
NM: new moon, FQ: first quarter
FM: full moon, LQ: last quarter
T. P. : Mean sea level of Tokyo Bay (Tokyo Peil)

Time series of Sea Level



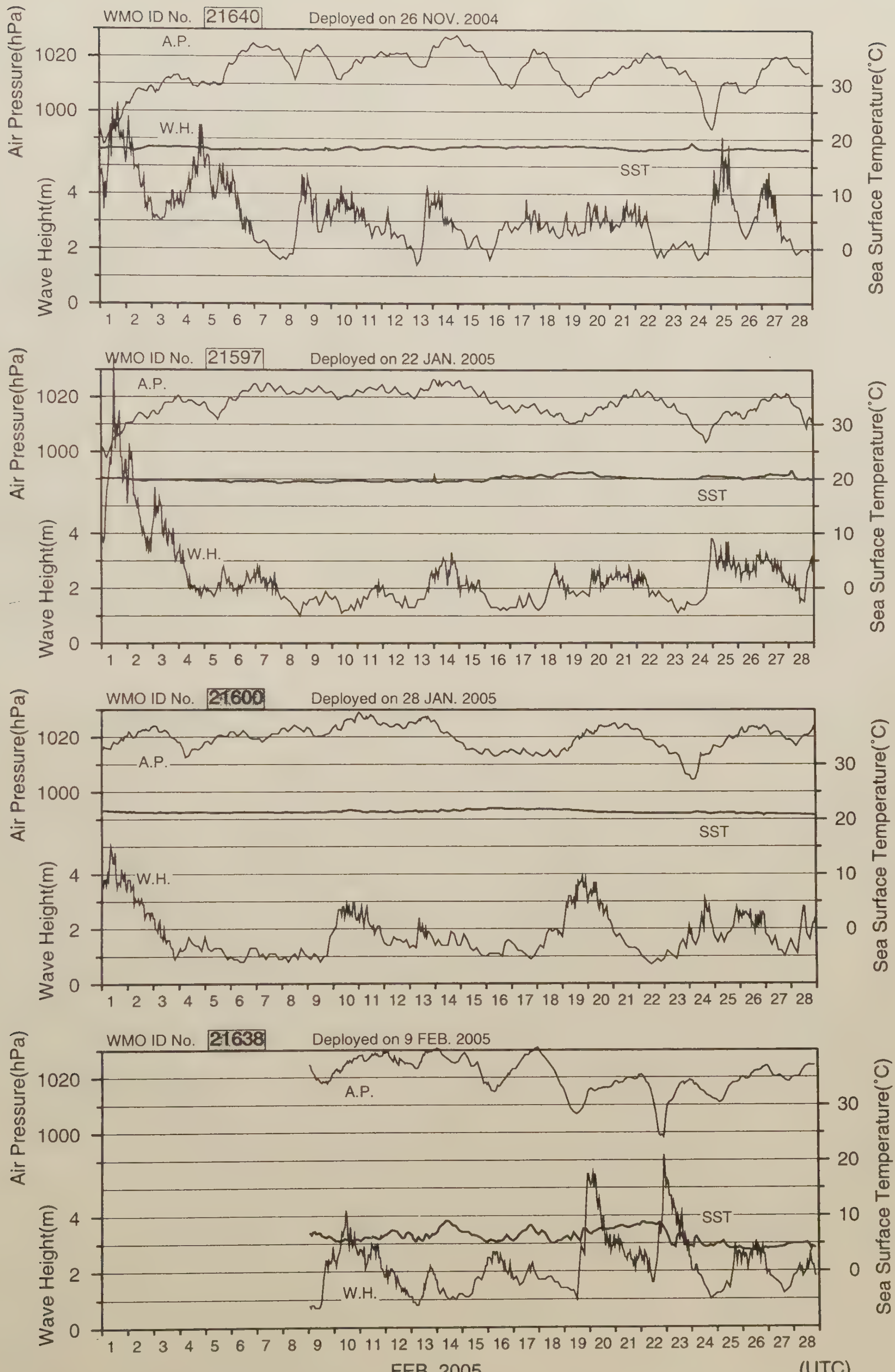
第15図 つづき

Fig. 15 continue

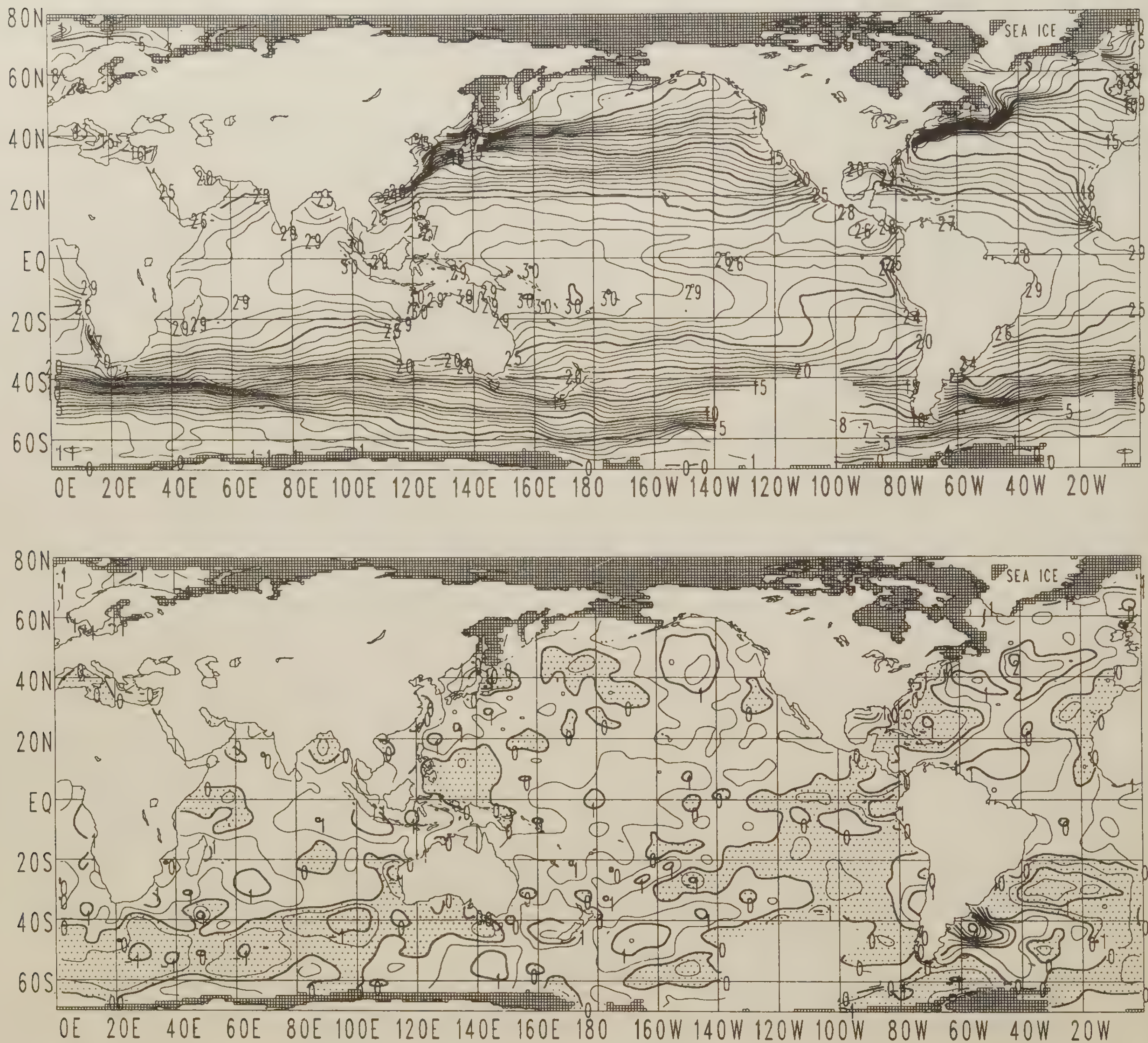


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Fig.16　Time series of JMA drifting buoy observation.
The upper panel shows paths of the buoys. Circles denote the position at 00h UTC everyday.
The lower panel shows time series of observation data.

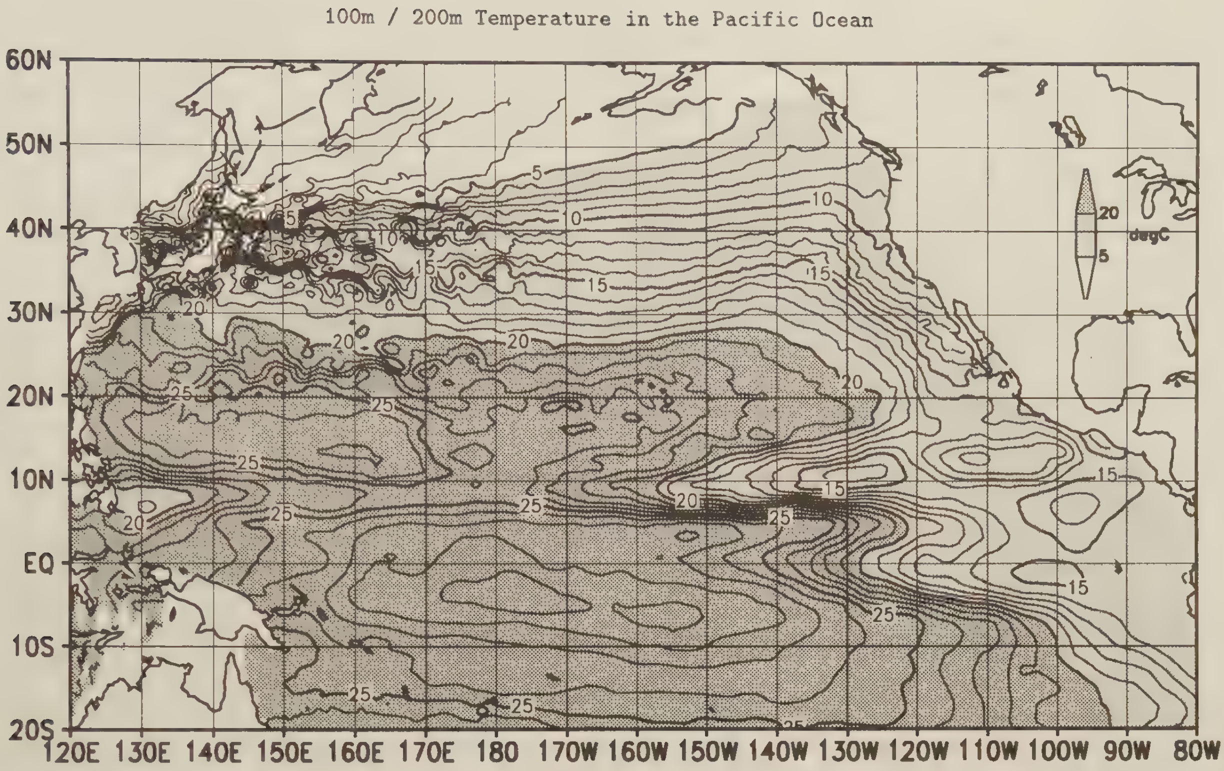


第16図 つづき
Fig.16 continue



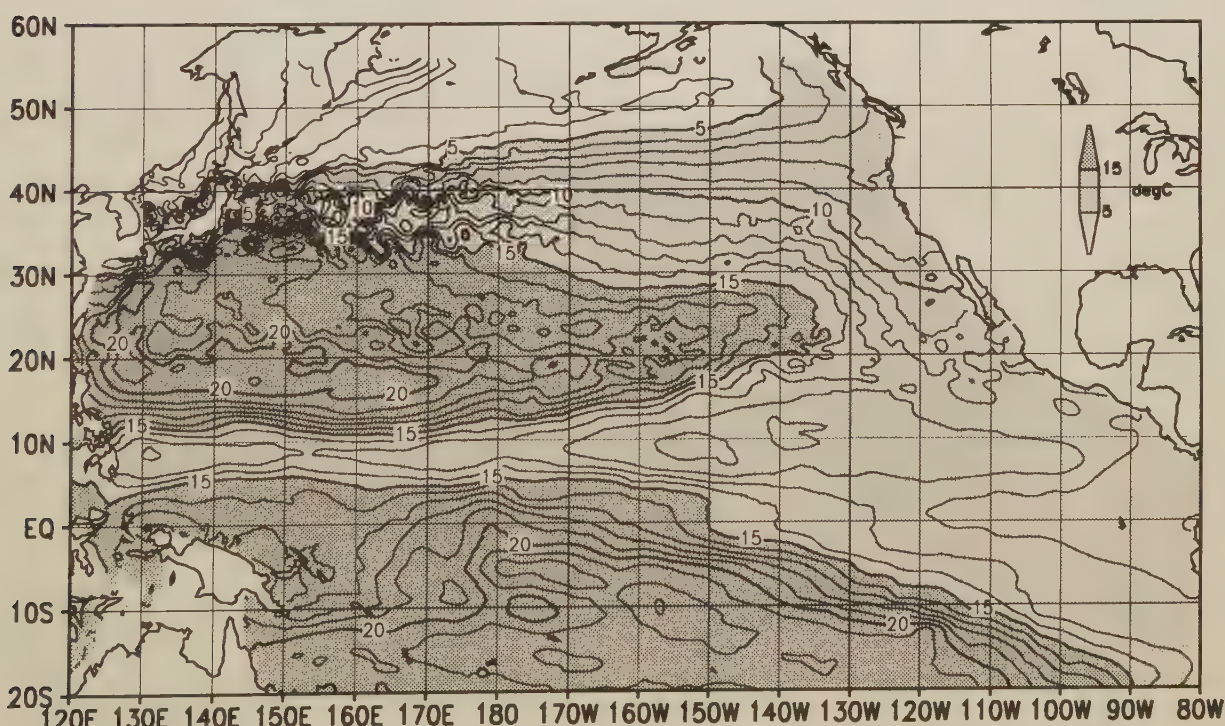
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Fig. 17 Monthly mean SST over the global ocean (top) and anomalies (bottom) for February 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C (top) and additional anomaly contours of ±0.5°C are shown by thin lines. Negative anomalies are spotted. Maximum coverage of sea ice is shaded. Data sources for sea ice are U.S. National Ice Center (polar regions) and JMA (the Sea of Okhotsk).



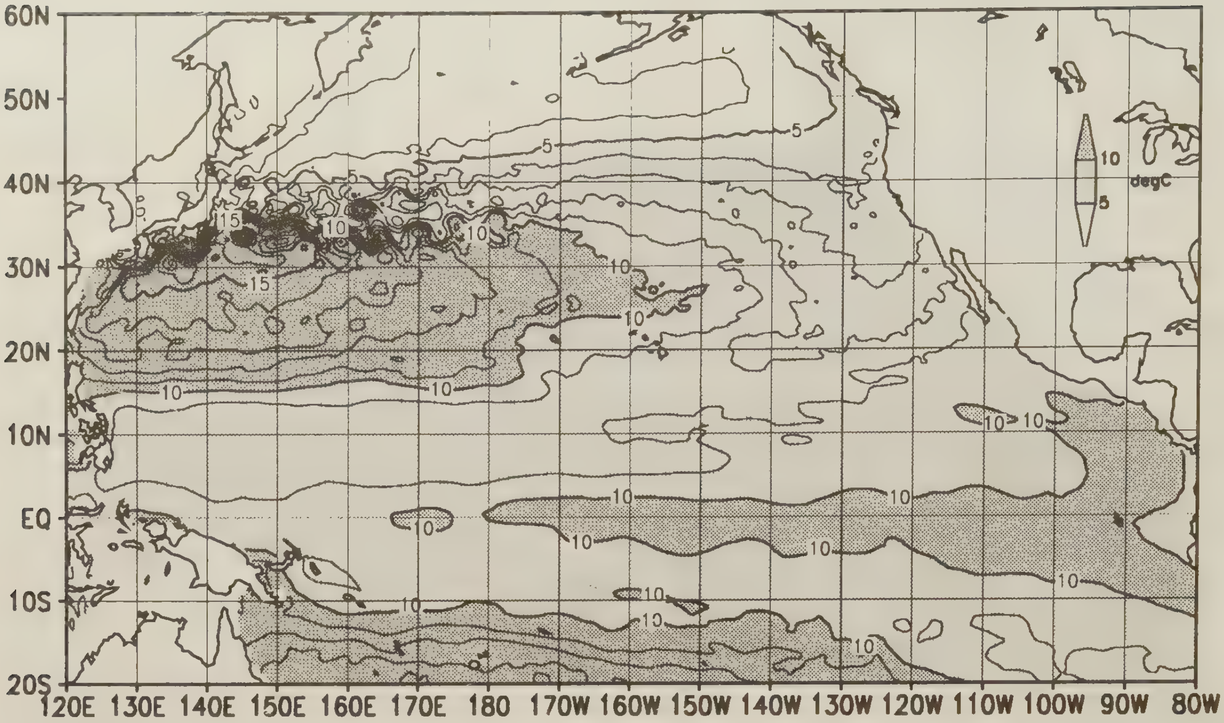
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Fig. 18　Monthly mean subsurface (100 m) temperature in the Pacific Ocean for February 2005. Contour interval is 1 ℃. (calculated by the Ocean Comprehensive Analysis System)



第 19 図　太平洋月平均表層水温図（深さ 200 m）（2005 年 2 月）
（海洋総合解析システムによる）

Fig. 19　Monthly mean subsurface (200 m) temperature in the Pacific Ocean for February 2005. Contour interval is 1 ℃. (calculated by the Ocean Comprehensive Analysis System)



第 20 図　太平洋月平均表層水温図（深さ 400 m）（2005 年 2 月）
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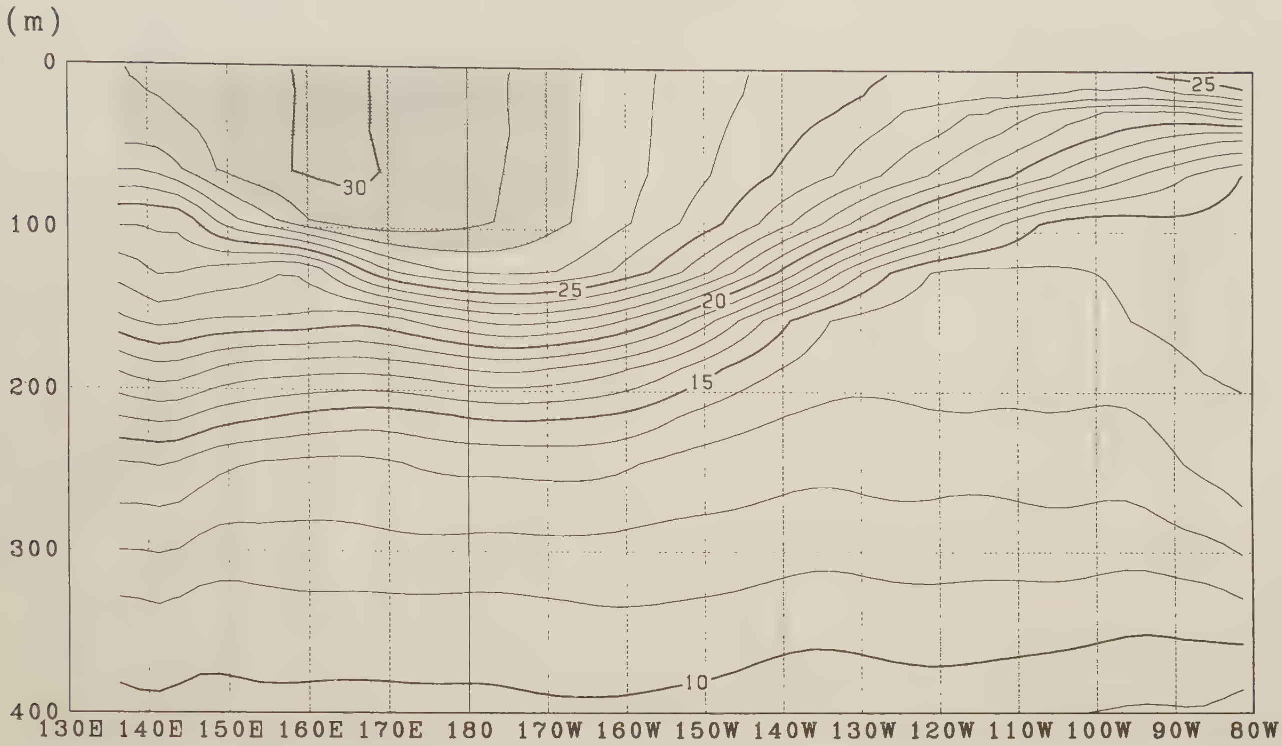
Fig. 20　Monthly mean subsurface (400 m) temperature in the Pacific Ocean for February 2005. Contour interval is 1 ℃. (calculated by the Ocean Comprehensive Analysis System)

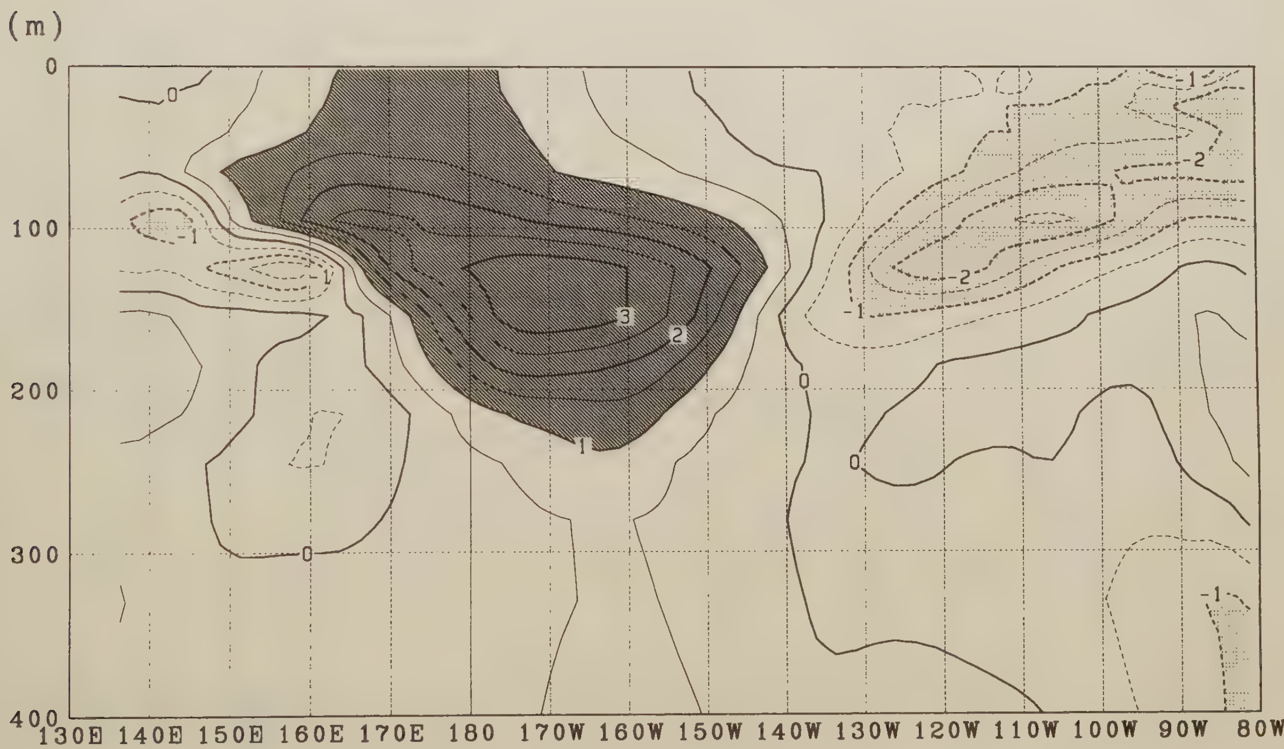


第 21 図　太平洋ブイ流跡図（2005 年 2 月）

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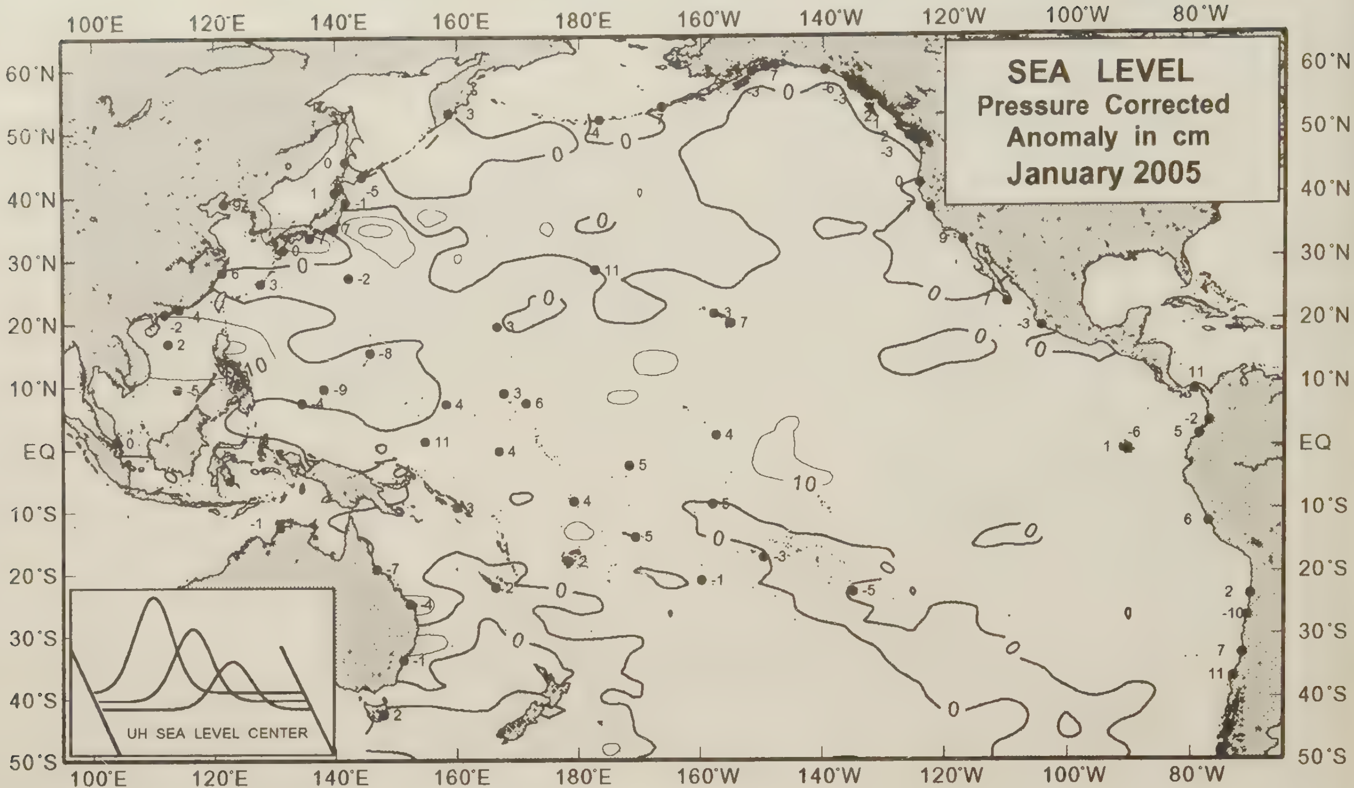
Depth-Longitude Sections of Equatorial Temperature & Anomalies





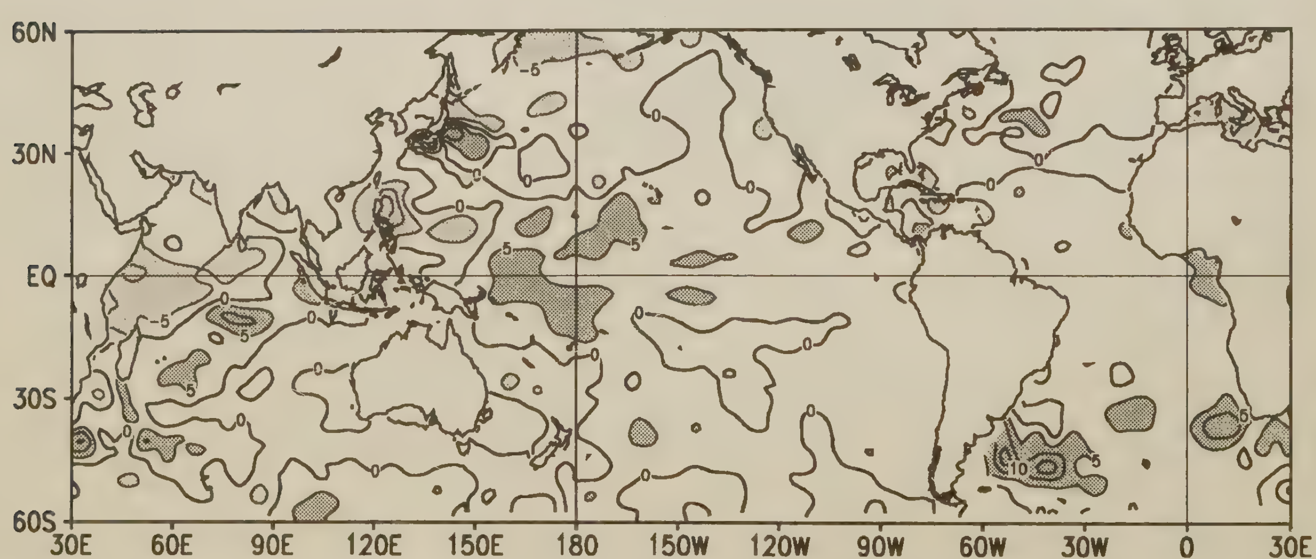
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第 23 図　太平洋月平均海面水位偏差図（2005 年 1 月）

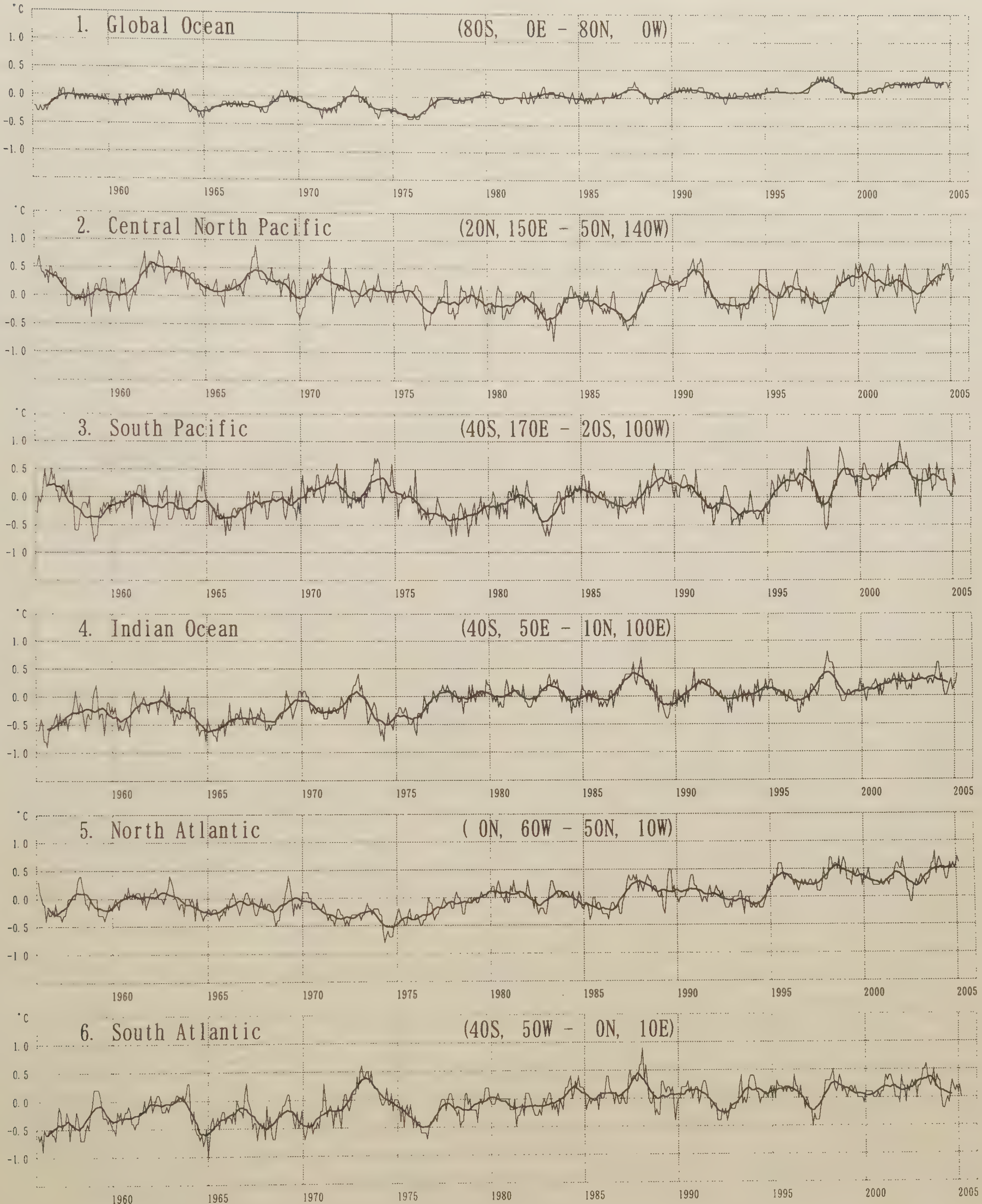
Fig. 23　Monthly sea level anomalies for January 2005 obtained from mean sea level (1993-2001) adjusted for atmospheric pressure. This figure is prepared by the SOC of ISLP-PAC, Department of Oceanography, University of Hawaii.



第 24 図　全球月平均海面高度偏差図（2005 年 1 月）

Fig. 24　Monthly sea surface height anomalies in the global ocean derived from the altimeter data of Jason-1 for January 2005. Contour interval is 5 cm. Positive anomalies exceeding +5 cm are shaded and negative anomalies exceeding -5 cm are spotted. Anomalies are computed from 1993-1998 base period means.

Long-term Variation of Monthly Mean SST Anomalies



第25図 海域平均海面水温偏差の長期変動

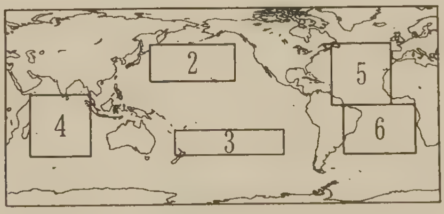
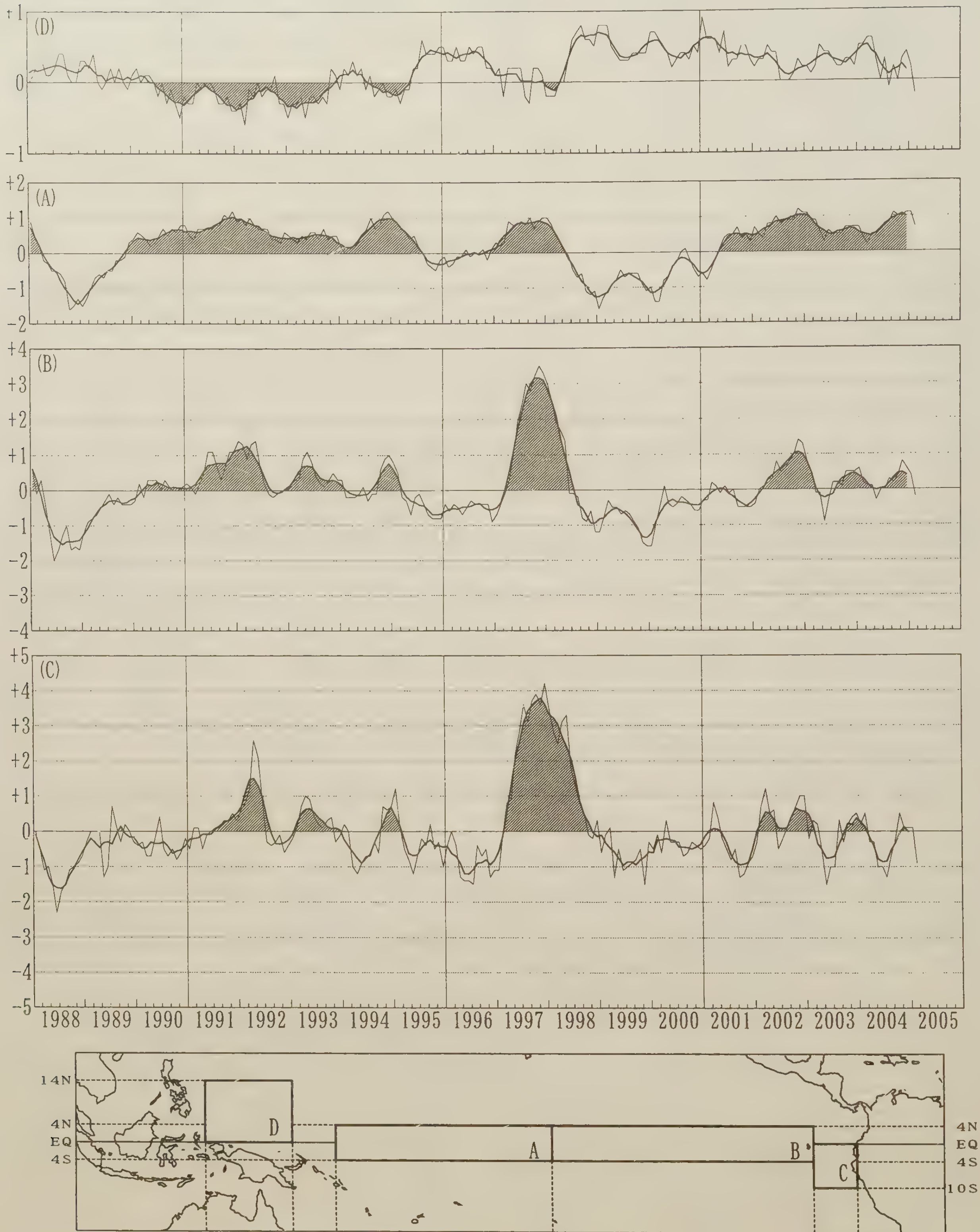


Fig. 25 Long-term variations of monthly mean sea surface temperature anomalies (°C) for the areas shown in the right panel. Anomalies are computed from the JMA climatology (1971-2000). Thin lines show the monthly mean and thick lines their 13-month running means.

Time Series of Tropical Pacific SST Anomalies



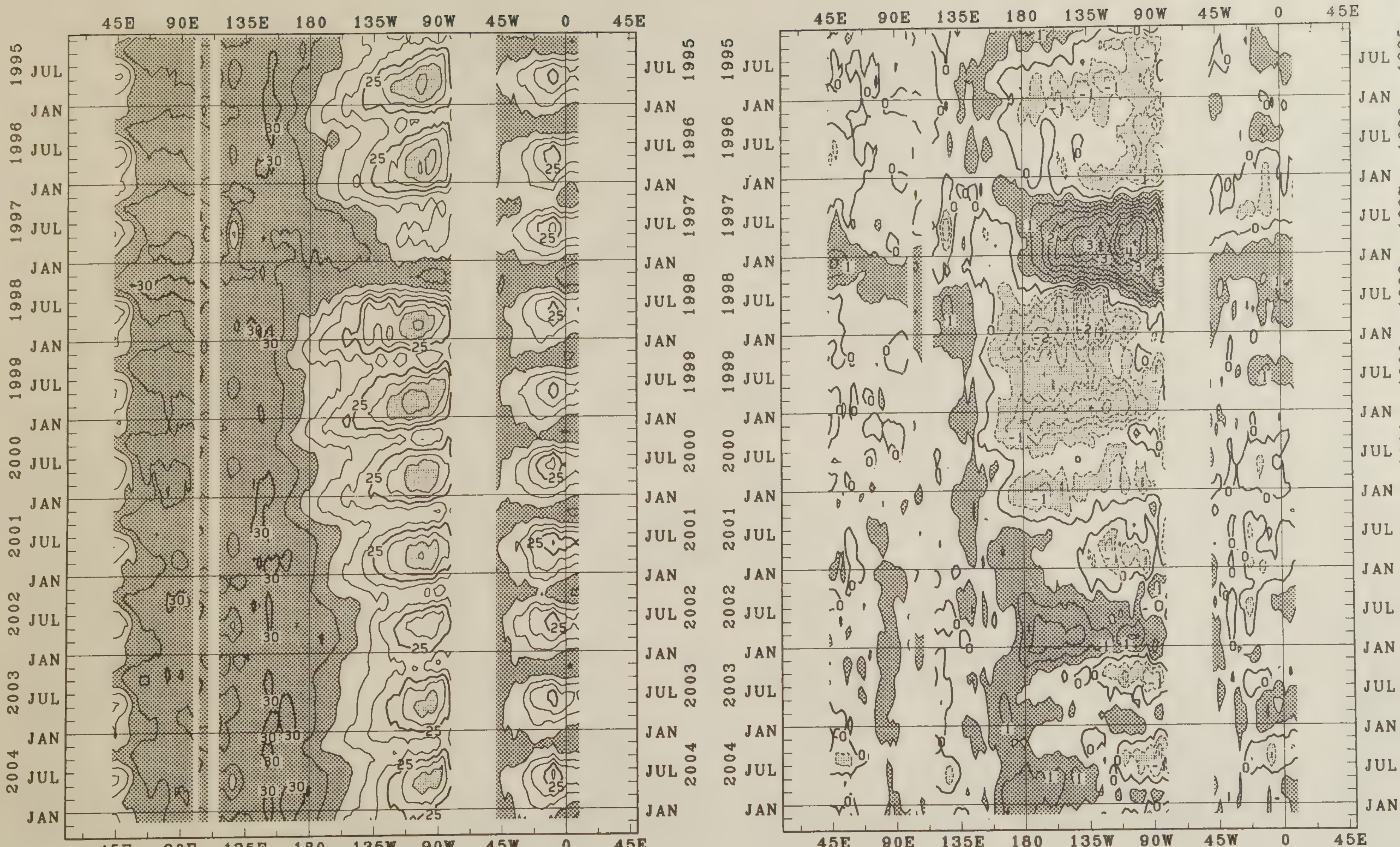
第26図　太平洋熱帯域の海面水温偏差時系列図

Fig. 26 Time series of monthly mean SST anomalies (°C) in the tropical Pacific Ocean for the areas indicated at the bottom panel. Thin lines show the monthly means and thick lines their 5-month running means. Positive anomalies (A, B, C) and negative anomalies (D) are shaded. Anomalies are computed from the JMA climatology (1971-2000).

MONTH YEAR	SEA SURFACE TEMPERATURE AND ANOMALY (°C)								SOI	SEA LEVEL PRESSURE ANOMALY (hPa)	
	REGION D 14N-EQ 130E-150E		REGION A 4N-4S 160E-150W		REGION B 4N-4S 150W-90W		REGION C EQ-10S 90W-80W		SOI	TAHITI 17-33S 149-37W	DARWIN 12-24S 130-52E
JAN 03	28.7	0.2	29.1	1.1	26.2	0.8	24.3	-0.2	-0.1	-0.1	0.2
FEB 03	28.4	0.1	28.9	0.9	26.8	0.5	26.3	0.3	-0.5	-1.5	-0.2
MAR 03	28.7	0.2	29.0	0.9	27.0	-0.1	26.5	0.2	-0.3	-0.2	0.5
APR 03	29.3	0.5	28.8	0.6	27.1	-0.1	24.9	-0.5	-0.1	0.5	0.8
MAY 03	29.7	0.4	28.9	0.3	26.0	-0.9	22.8	-1.5	-0.6	-0.7	0.2
JUN 03	29.8	0.4	29.1	0.6	25.9	-0.3	21.9	-1.0	-0.9	-0.9	0.4
JUL 03	29.6	0.3	29.0	0.5	25.6	0.2	20.9	-1.0	0.2	0.7	0.3
AUG 03	29.4	0.2	28.9	0.5	24.9	0.2	21.2	0.3	0.0	-0.2	-0.1
SEP 03	29.5	0.2	28.9	0.5	24.8	0.1	20.2	-0.3	-0.1	-0.3	0.0
OCT 03	29.7	0.3	29.1	0.7	25.2	0.5	21.1	0.2	-0.1	-0.5	-0.4
NOV 03	29.6	0.3	29.1	0.7	25.2	0.5	22.2	0.4	-0.2	0.0	0.4
DEC 03	29.2	0.2	28.9	0.7	25.5	0.5	23.4	0.5	1.1	0.9	-1.1
JAN 04	29.0	0.5	28.7	0.7	26.0	0.6	24.7	0.2	-1.0	-1.5	0.9
FEB 04	28.8	0.5	28.4	0.4	26.5	0.2	26.5	0.5	0.8	1.4	-0.6
MAR 04	29.1	0.6	28.3	0.2	27.2	0.1	26.0	-0.3	0.1	-0.7	-1.3
APR 04	29.4	0.6	28.7	0.5	27.3	0.1	25.1	-0.3	-1.4	-1.0	1.3
MAY 04	29.6	0.3	29.1	0.5	26.6	-0.3	23.3	-1.0	1.2	0.9	-0.7
JUN 04	29.4	0.0	29.1	0.6	26.2	0.0	21.9	-1.0	-1.1	0.1	1.7
JUL 04	29.6	0.3	29.3	0.8	25.4	0.0	20.6	-1.3	-0.6	-0.2	0.9
AUG 04	29.1	-0.1	29.2	0.8	25.0	0.3	20.2	-0.7	-0.5	-0.5	0.3
SEP 04	29.5	0.2	29.5	1.1	24.9	0.2	20.3	-0.2	-0.2	0.4	0.9
OCT 04	29.4	0.0	29.4	1.0	25.1	0.4	21.4	0.5	-0.2	0.0	0.3
NOV 04	29.6	0.3	29.4	1.0	25.5	0.8	21.9	0.1	-0.7	-0.8	0.5
DEC 04	29.4	0.4	29.3	1.1	25.6	0.6	23.0	0.1	-0.7	-1.4	-0.1
JAN 05	28.7	0.2	29.1	1.1	25.8	0.4	24.6	0.1	0.3	0.3	-0.3
FEB 05	28.1	-0.2	28.7	0.7	26.1	-0.2	25.1	-0.9	-2.2	-3.8	1.9

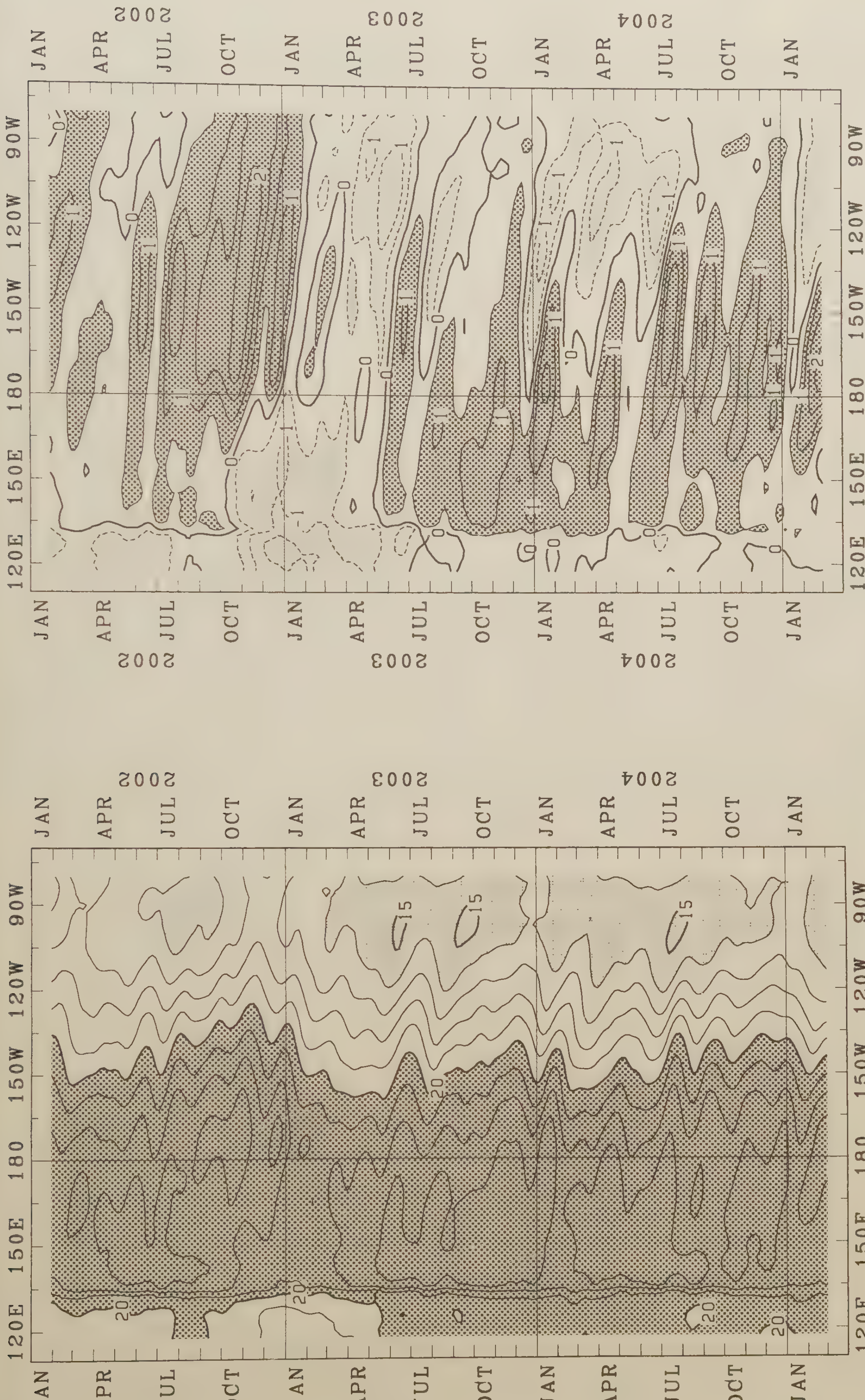
第1表　太平洋熱帯域の大気及び海洋の監視指数

Table 1　Atmospheric and oceanic monitoring indices in the tropical Pacific Ocean



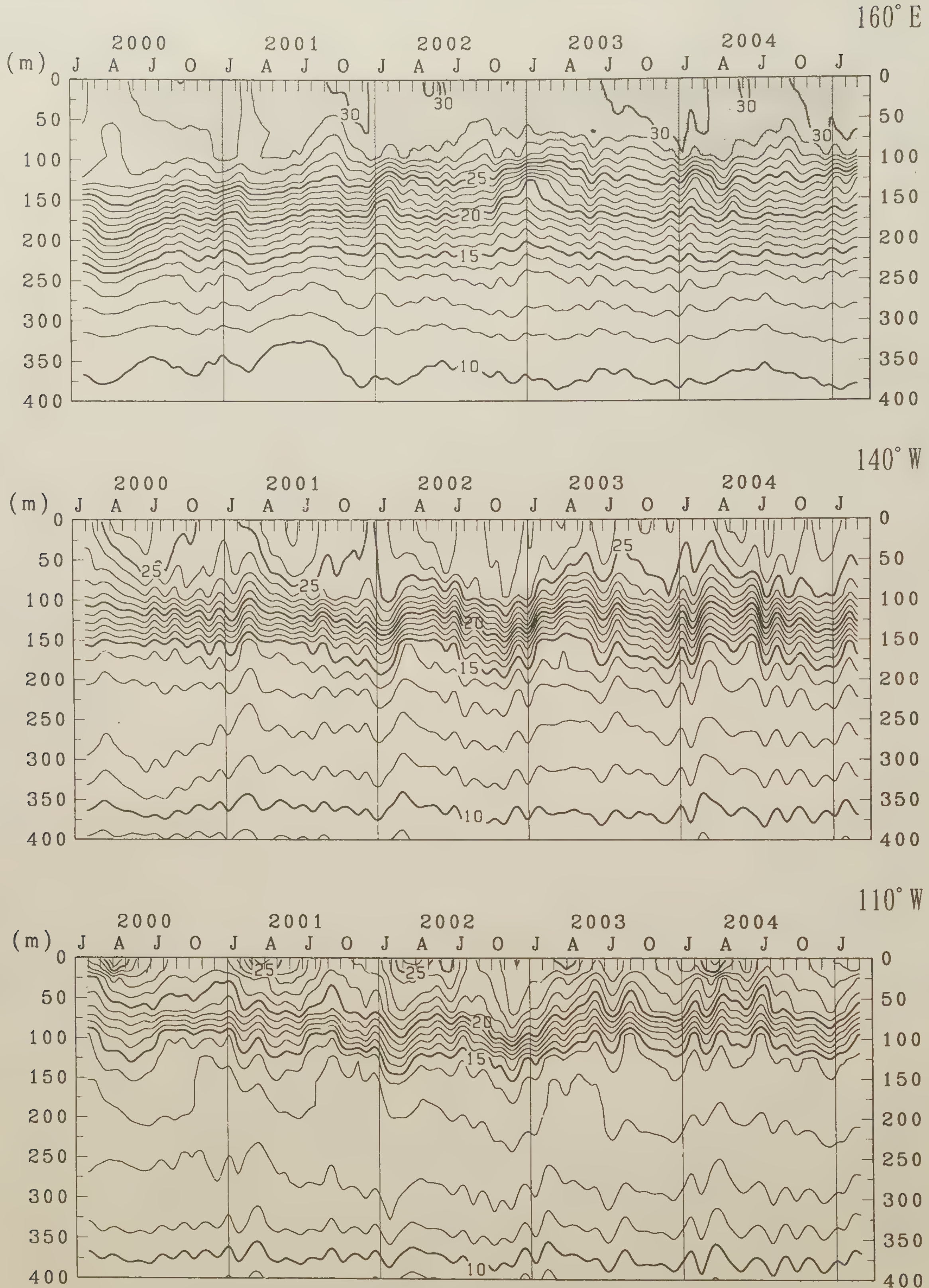
第 27 図　赤道に沿った海面水温（左）および偏差（右）の時間-経度断面図

Fig. 27　Time-longitude sections of SSTs (left) and anomalies (right) along the equator (2 °N-2 °S) in the global ocean. Contour interval is 1 °C (left) and 0.5 °C (right). Values greater than 28 °C (+0.5 °C) are shaded and values less than 23 °C (-0.5 °C) are spotted in the left (right) panel. Dashed contours indicate negative anomalies in the right panel. Anomalies are computed from 1971-2000 base period means.



第28図　太平洋の赤道に沿う海洋表層の貯熱量（左）及び偏差（右）の時間－経度断面図

Fig. 28 Time-longitude sections of ocean heat content in the upper 260 m along the equator (left) and anomalies (right) in the Pacific Ocean. Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C (left) and 0.5°C (right). Values greater than 20°C (+0.5°C) are shaded and values less than 16°C (−0.5°C) are spotted in the left (right) panel. Dashed contours indicate negative anomalies in the right panel. Anomalies are computed from 1987-2003 base period means.



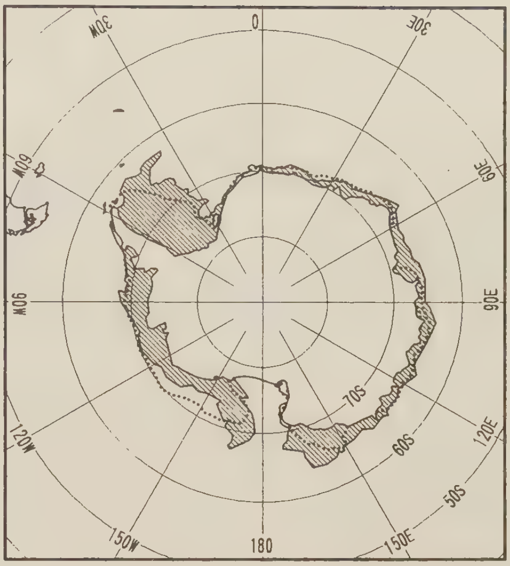
第29図　太平洋赤道域の表層水温の時間－深度断面図
（上：西部、中：中部、下：東部）

Fig. 29 Time-depth sections of equatorial subsurface temperature for the western Pacific (top, 160°E), the central Pacific (middle, 140°W) and the eastern Pacific (bottom, 110°W). Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C. Values greater than 28°C are shaded.



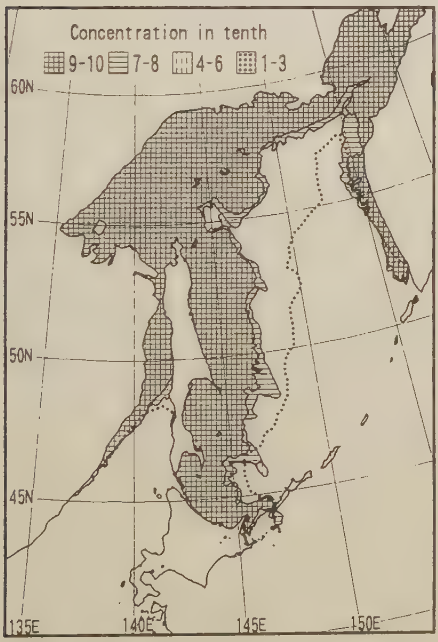
第30-1図　北極域の海氷図（2005年 2月15日）

Fig.30-1 Sea ice chart in the Arctic on 15 Feb. 2005.
The shaded area represents the sea ice extent. The dotted line denotes the mean ice edge averaged for the period from 1972 through 1990.
The data source is the National Ice Center (USA).



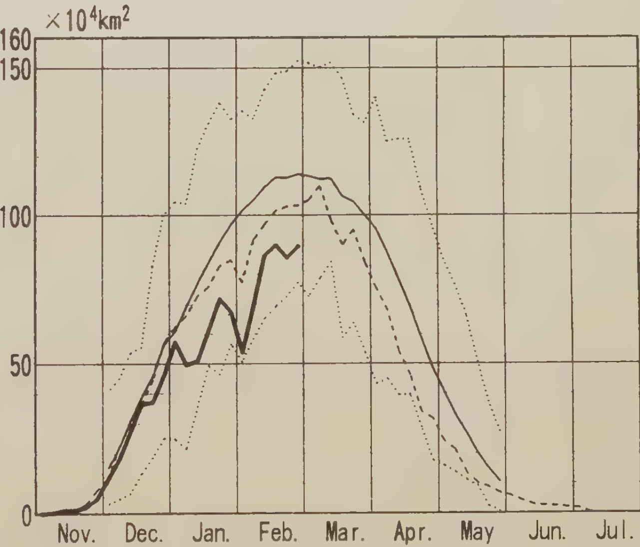
第30-2図　南極域の海氷図（2005年 2月14日）

Fig.30-2 Sea ice chart in the Antarctic on 14 Feb. 2005.
The shaded area represents the sea ice extent. The dotted line denotes the mean ice edge averaged for the period from 1973 through 1990.
The data source is the National Ice Center (USA).



第30-3図 オホーツク海の海氷図（2005年 2月15日）

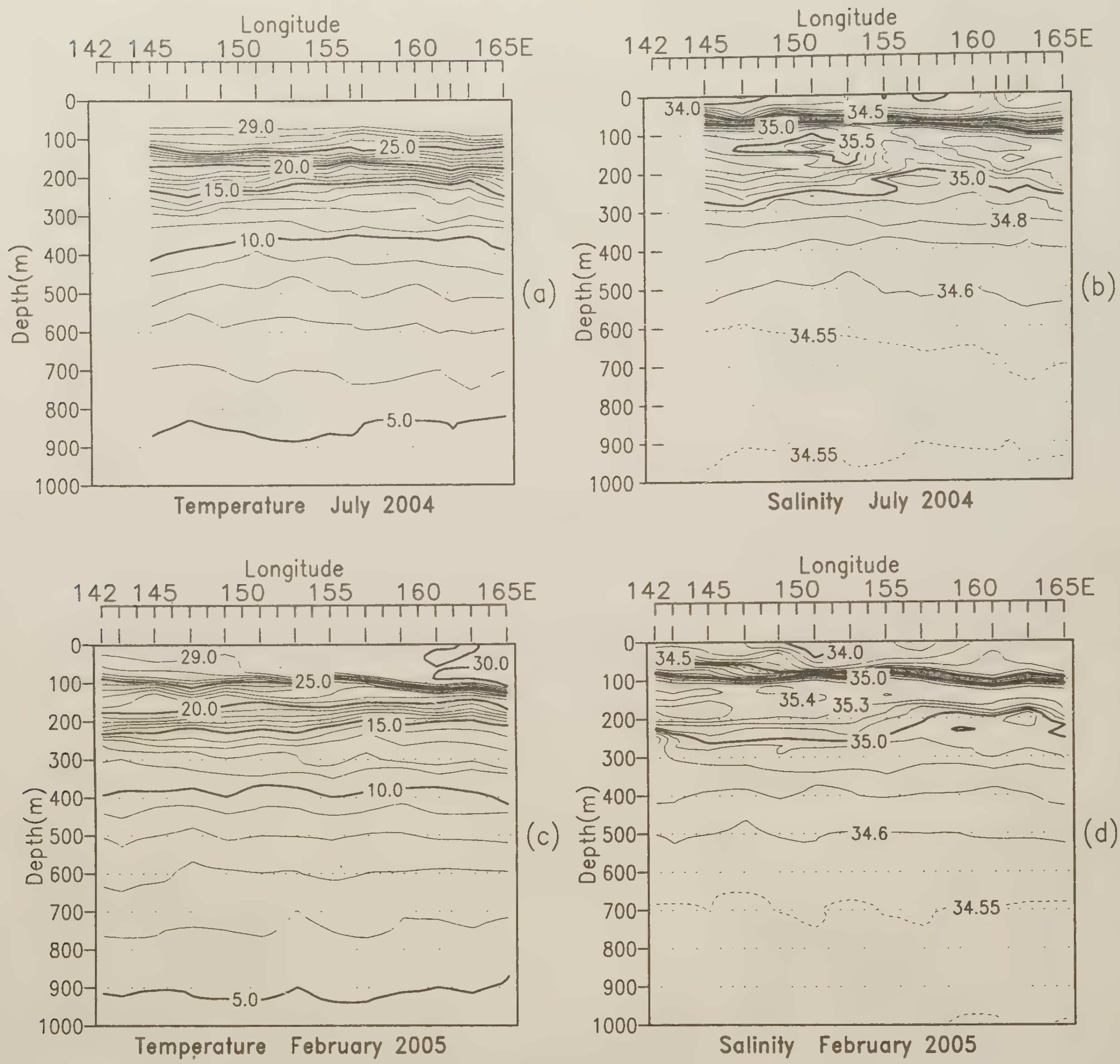
Fig.30-3 Sea ice chart in the Sea of Okhotsk on 15 Feb. 2005.
The dotted line denotes the mean ice edge averaged for the period from 1971 through 2000.

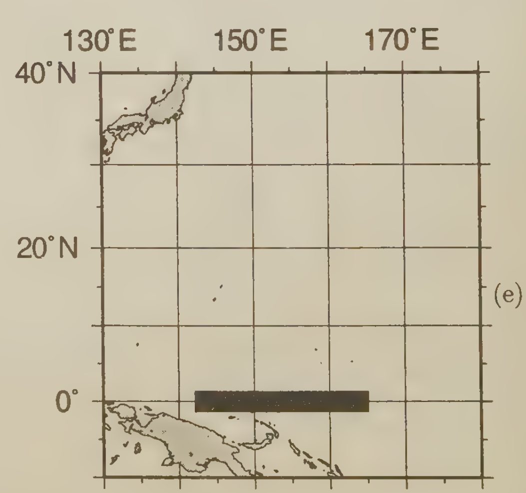


第30-4図 オホーツク海の海氷域面積

Fig.30-4 Time series of 5-day sea ice area in the Sea of Okhotsk.

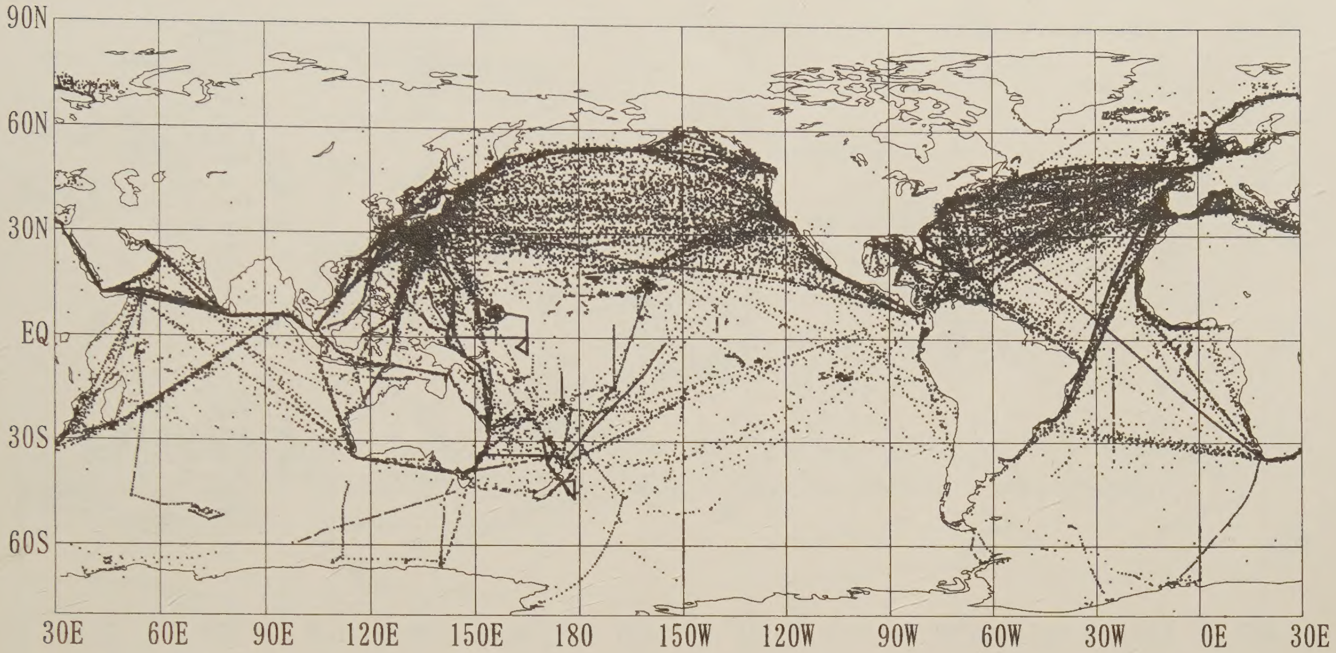
- ―――― (thick) : current season (2004/2005)
- ―――― : mean extent (1971-2000)
- ………… : maximum or minimum extent (1971-2004)
- - - - - - : last season (2003/2004)





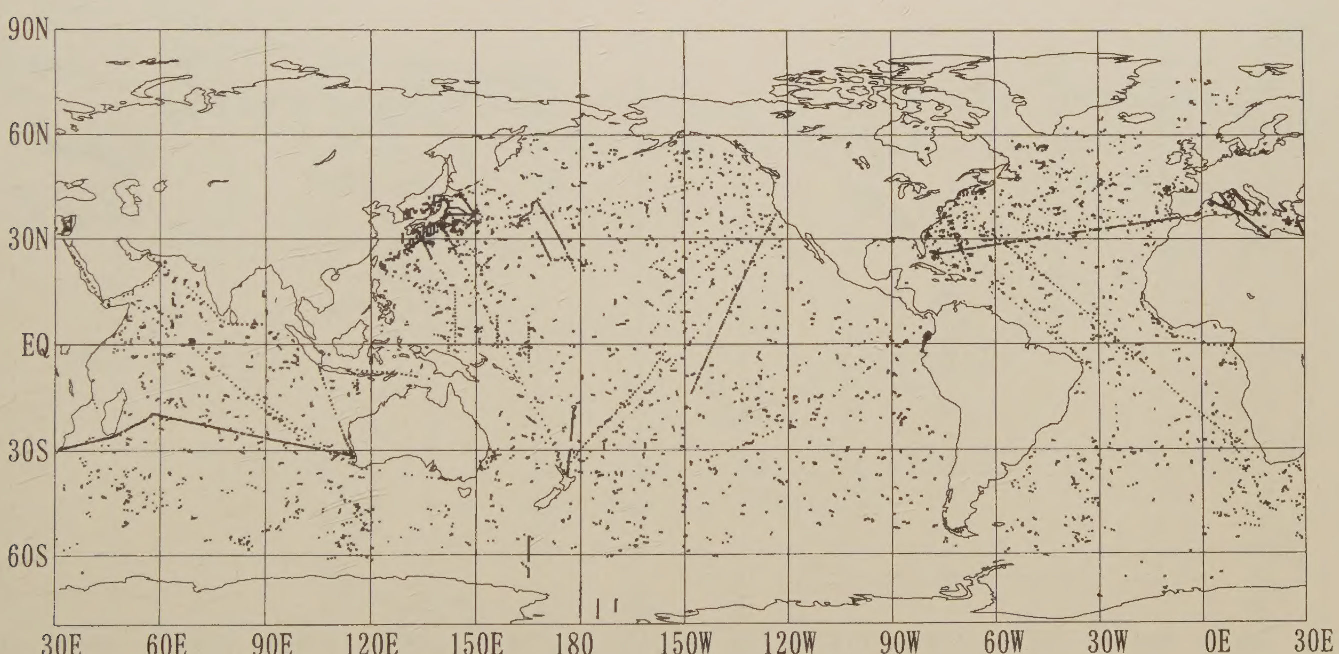
第 31 図 気象庁凌風丸及び神戸海洋気象台啓風丸による赤道に沿った水温・塩分鉛直断面図．(a) 水温 (2004 年 7 月)，(b) 塩分 (2004 年 7 月)，(c) 水温 (2005 年 2 月)，(d) 塩分 (2005 年 2 月)，(e) 観測位置図．

Fig. 31 Vertical sections along the equator by R/V Ryofu Maru and R/V Keifu Maru. (a) Water temperature and (b) Salinity observed in July 2004, (c) Water temperature and (d) Salinity observed in February 2005, and (e) Location of oceanographic observations along the equator.



SHIP messages

Total data:178128

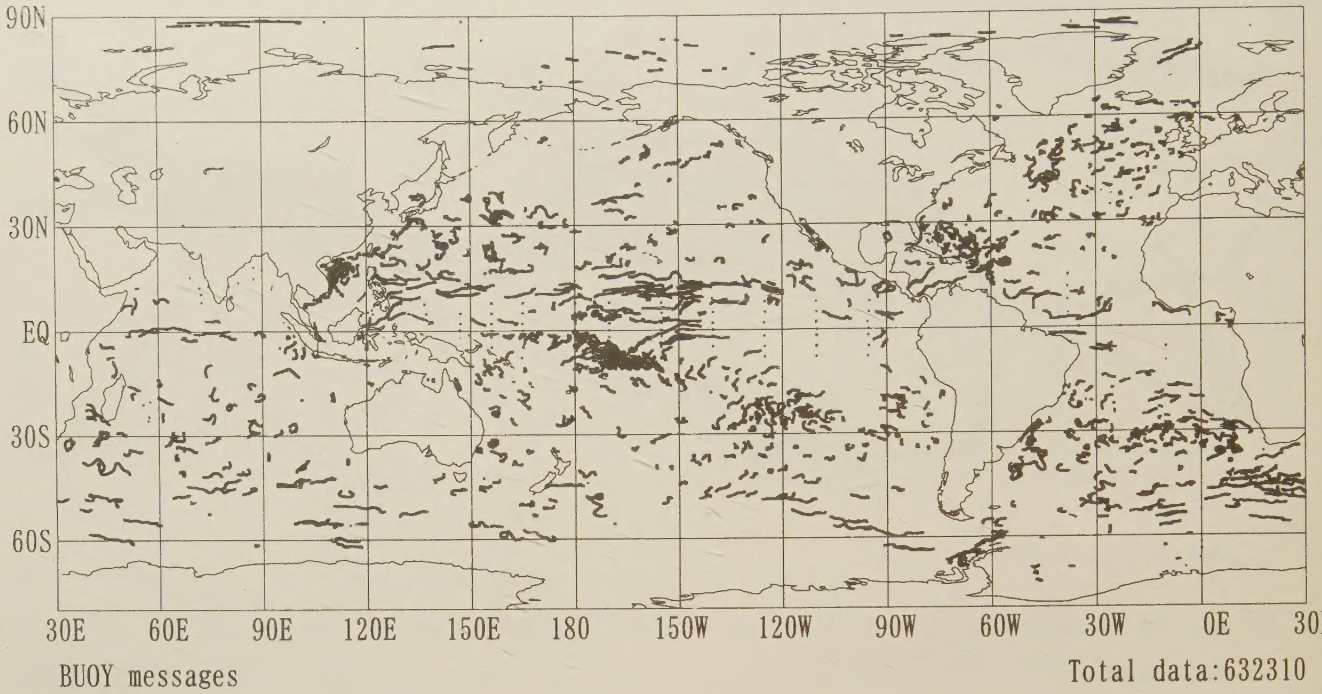


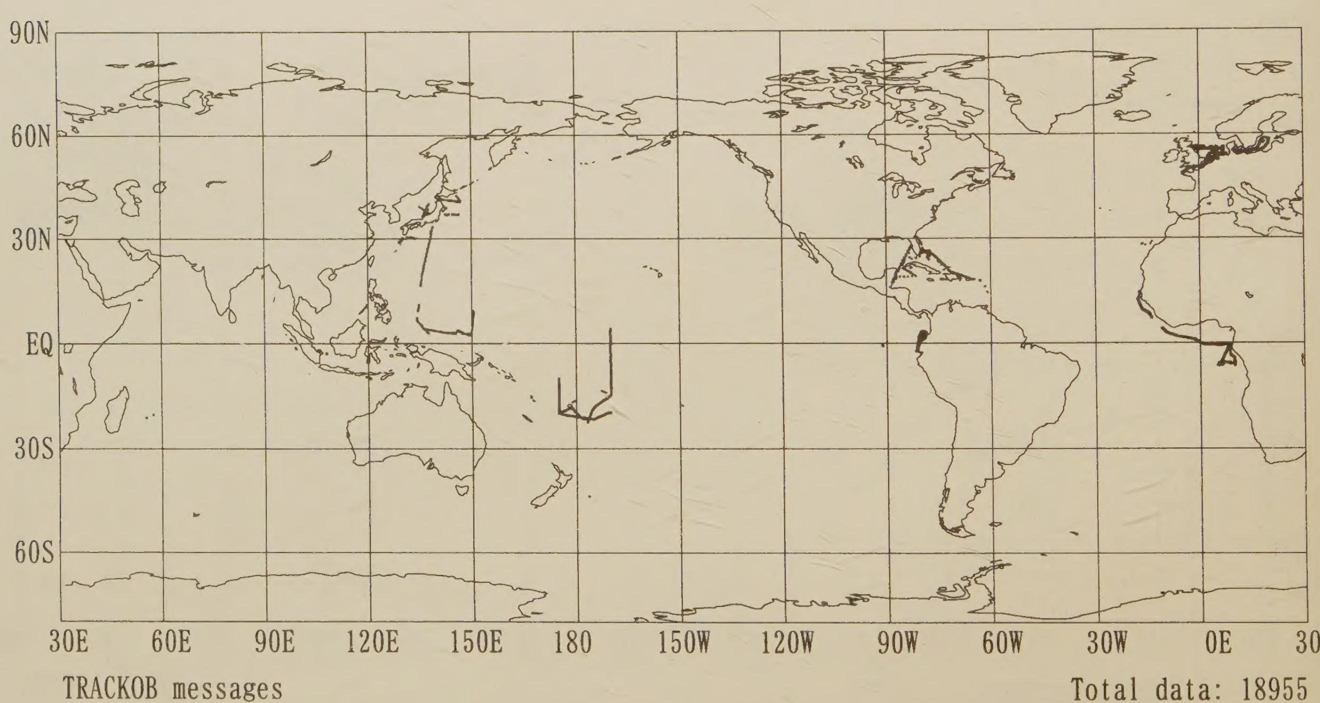
BATHY/TESAC messages

Total data: 19941

第32-1図　測点分布図(2005年 2月)

Fig. 32-1 Geographical distribution of SHIP messages (top) and BATHY/TESAC messages (bottom) for February 2005.





第32-2図　測点分布図(2005年 2月)

Fig. 32-2 Geographical distribution of BUOY messages (top) and TRACKOB messages (bottom) for February 2005.

気　象　庁　海　洋　月　報

Monthly Ocean Report

February 2005 (No. 146)

本月報掲載の 2005 年 2 月のプロダクトには、気象庁が観測したデータ及び GTS（全球気象通信網）を通じて入手した国際気象通報式による通報のほか、下記の機関等から提供いただいたデータを使用しています。御礼申し上げます。

防衛庁、水産庁、海上保安庁

水産総合研究センター

海洋研究開発機構、宇宙航空研究開発機構

東京大学

水産試験場等（北海道、青森県、岩手県、宮城県、山形県、福島県、茨城県、東京都、新潟県、富山県、石川県、静岡県、愛知県、三重県、和歌山県、山口県、高知県、佐賀県）

（順不同）

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